"Privacy Roundtables – Comment, Project No. P095416."

Cookie Wars, Real-Time Targeting,
and Proprietary Self Learning Algorithms:
Why the FTC Must Act Swiftly to Protect Consumer Privacy

Comments of the Center for Digital Democracy and U.S. PIRG

4 November 2009

On behalf of the Center for Digital Democracy and U.S.PIRG, we want to express our appreciation for this new initiative on the part of the commission to ensure that consumer privacy and related safeguards are a fundamental part of the online experience. The new administration has brought new leadership to the FTC, especially in its chairman, director of the Bureau of Consumer Protection, and senior privacy staff. Time is of the essence, however, as the commission has lagged far behind all of the latest developments in the interactive marketing arena, particularly in the important area of online data collection.

In its past complaints on behavioral advertising and related data collection/consumer profiling and targeting issues in 2006, 2007, and 2009, as well as in its opposition to the Google/DoubleClick merger, CDD and U.S. PIRG have provided the commission with a detailed analysis of what the online ad industry has termed the "marketing and media ecosystem."[1] For example, we urged the FTC early on to investigate and address the online ad exchange marketplace on both consumer privacy and consolidation grounds. Today, consumers online face the rapid growth and ever-increasing sophistication of the various techniques advertisers employ for

---

[1] 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 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. 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. 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. 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 (all viewed 12 Oct. 2009).

data collection, profiling, and targeting across all online platforms. The growth of ad and other optimization services for targeting, involving real-time bidding on ad exchanges; the expansion of data collection capabilities from the largest advertising agencies (with the participation of leading digital media content and marketing companies); the increasing capabilities of mobile marketers to target users via enhanced data collection; and a disturbing growth of social media surveillance practices for targeted marketing are just a few of the developments the commission must address. But despite technical innovation and what may appear to be dramatic changes in the online data collection/profiling/targeting market, the commission must recognize that the underlying paradigm threatening consumer privacy online has been constant since the early 1990's. So-called "one-to-one marketing," where advertisers collect as much as possible on individual consumers so they can be targeted online, remains the fundamental approach.[2]

As the commission knows, CDD and U.S. PIRG has regularly supplied the FTC with a stream of research and information on the dimensions and specific implementations of the online marketing system. We are especially concerned with two fundamental and related issues. First, that consumers have no understanding of how their data are being collected and used for both profiling and targeting. Second, that these data are often used to offer consumers products and services—including critical ones related to personal finances and health—via interactive marketing techniques that directlyaffect their welfare. Consumers are faced with a largely invisible and all-encompassing data collection apparatus, often operating automatically, that makes decisions about the prices and services they are offered. The online ad industry itself has called this system the "persuasion architecture process" or "precision marketing."[3]

Beyond the objective evidence, such as the recent UC Berkeley/University of Pennsylvania study ("Americans Reject Tailored Advertising and Three Activities that Enable It"), is a simple fact: very few consumers—let alone policymakers—understand developments in the market and its direction.[4] Given the new leadership at the FTC, there is no longer any reason for the commission to fail to analyze the information available, and to develop reasonable principles to protect consumers online. Surely consumers deserve to understand how the online marketing system works, designed as it is to make them "convert" through some desired action, and to decide for themselves if they want to participate in such a system.

---

[2] For an overview of the one-to-one marketing paradigm, see Don Peppers and Martha Rogers, *The One to One Future* (New York: Doubleday, 1993). See also Jeff Chester, *Digital Destiny: New Media and the Future of Democracy* (New York: The New Press, 2007), chapter 7.

[3] See, for example, "Coremetrics Announces Launch of Impression Attribution: Groundbreaking Solution Links Behaviors and Conversions to Online Campaigns," 17 Feb. 2009, http://www.coremetrics.com/company/2009/pr09_02_17_launch_impression.php (viewed 27 Oct. 2009).

[4] Joseph Turow, et al., "Americans Reject Tailored Advertising and Three Activities that Enable It," 29 Sept. 2009, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1478214 (viewed 27 Oct. 2009).

Our concerns extend as well to the mobile arena, where "advertisers, online publishers, and advertising networks are willing to pay operators for accurate and reliable targeting information to improve the delivery of campaigns and thus command higher CPM rates from advertisers."[5] In the current economic climate, moreover, which occurred as a result of unethical business practices unchecked by regulators, U.S. consumers require a more vigilant and proactive FTC. In this context, the need for consumer protection is critical, especially in light of the rapidly evolving interactive advertising marketplace.

The advertising industry has unleashed an array of interactive data collection practices for the Internet and other digital media that pose a serious threat to the privacy and welfare of U.S. consumers. Sophisticated tracking technologies stealthily monitor our travels online, often supplemented by extensive off-line consumer-profile databases, enabling marketers to create data profiles to transmit advertising using a variety of micro-targeting techniques. This consumer profiling and targeted advertising takes place largely without our knowledge or consent, and affects such sensitive areas as financial transactions and health-related inquiries. Children and youth, among the most active users of the Internet and mobile devices, are especially at risk in this new media-marketing ecosystem.

Industry self-regulation, it is clear, has failed to offer meaningful protection of consumer privacy. So-called "Notice and Choice," which has been the foundation of the self-regulatory regime, has done nothing to stem the tide of increasing data collection and use—all without the genuinely informed understanding and consent of users. As with our financial system, privacy and consumer protection regulators have failed to keep abreast of developments in the area they are supposed to

---

[5] According to a recent posting on Cisco Community Central, "Operators have additional subscriber information such as location, user device type, bandwidth speed, etc., which can enhance the effectiveness of online advertising campaigns…. These operator-controlled identifiers are correlated with demographic databases which can only be accessed by advertising partners registered to the operator's advertising ecosystem. Information is delivered in real-time to the advertising network partner describing the source of a web request in general terms (locality, demographic segments, etc.) without tracking user behavior or directly identifying the subscriber. With such data available, a highly relevant advertisement can be inserted from the ad network in real-time onto the retrieved web content page. By using only anonymous demographic information, the solution never handles any personally identifiable information (PII), which avoids privacy concerns that have arisen with other online advertising targeting approaches…. Operators could further leverage their customer relationships to include additional voluntary opt-in information from subscribers—perhaps in return for free, ad-funded services—that could be used by advertisers to uniquely personalize online advertising and marketing campaigns. Lastly, with very transparent subscriber Opt-in privacy policies, mobile operators might further enhance targeted advertising with subscriber location information from the operator's network." Brian Walsh, "Mobile Advertising—The Operator Holds the Advantage," Cisco Community Central, 15 Sept. 2009, https://www.myciscocommunity.com/community/sp/mobility/blog/2009/09/15/mobile-advertising-the-operator-holds-the-advantage (viewed 27 Oct. 2009).

oversee. In order to ensure adequate trust in online marketing—an important and growing sector of our economy—we need sensible policies to protect consumers.

Unfortunately, most Americans know very little about what the industry calls the new "media and marketing ecosystem." The forms of advertising, marketing and selling that are emerging as part of the new media depart in significant ways from the more familiar commercial advertising and promotion we have seen in print and on television in the past. In today's digital marketing system, advertising, editorial content, data collection, measurement, and content delivery are increasingly intertwined. As a major advertising industry report on the future of marketing in the digital era explained, "The influx of data into marketing has been one of the biggest changes to players across the landscape…. Advertising strategies, campaigns, and distribution are increasingly based on predictive algorithms, spreadsheets, and math…. Every Web page's individual views, every word typed in a search query box (also known as the 'database of consumer intentions'), every video download, and even every word in an e-mail may create one more data point that a marketer can leverage and use to more precisely target the audience…."[6]

Specifically, few U.S. consumers understand the power and intent of behavioral targeting, which, notes *eMarketer*,

> segments the audience based on observed and measured data—the pages or sites users visit, the content they view, the search queries they enter, the ads they click on, the information they share on social internet sites and the products they put in online shopping carts. This data is combined with the time, length and frequency of visits…. Behavioral targets people, not pages. That is, behavioral uses the actions of a person to define its target, unlike contextual targeting, which serves ads based on a page's contents…. Behavioral information can also be merged with visitor demographic data— such as age, gender, and ZIP code…. Whether tracked by cookies or ISPs, the sort of user data that builds behavioral profiles takes in search queries, Web site visits, specific content consumed (such as clicks or playing a video), product shopping comparisons, product purchases and items placed in shopping carts but not bought.[7]

Expressed another way, "Behavioral targeting customizes messages to individual consumers based on their specific shopping interests, and characteristics like gender, age, and ethnicity. Behavioral targeting is a generic name for a series of technologies that collect and organize click stream data, develop data warehousing structures, apply data mining algorithms to uncover consumer browsing patterns,

[6] Edward Landry, Carolyn Ude, and Christoper Vollmer, "HD Marketing 2010: Sharpening the Conversation," Booz/Allen/Hamilton, ANA, IAB, AAAA, 2008, http://www.boozallen.com/media/file/HD_Marketing_2010.pdf (viewed 12 Oct. 2009).

[7] David Hallerman, "Behavioral Targeting: Marketing Trends," *eMarketer*, June 2008, pp. 2, 11. Personal copy.

and serve targeted ads matched to an individual."[8] But regardless of the definition, one thing is clear: behavioral targeting, in all of its forms and implementations, is quickly becoming a major force in online advertising. U.S. spending for BT online advertising is predicted to grow dramatically to $4.4 billion by 2012 (up from "only $775 million in 2008").[9]

Thus we are witnessing a dramatic growth in the capabilities of marketers to track and assess our activities and communication habits on the Internet.[10] Advertisers and marketers have developed an array of sophisticated and ever-evolving data collection and profiling applications, honed from the latest developments in such fields as semantics, artificial intelligence, auction theory, social network analysis, data-mining, and statistical modeling. Behavioral targeting is just one tool in the interactive advertisers' arsenal. Social media monitoring, so-called "rich-media" immersive marketing, new forms of viral and virtual advertising and product placement, and a renewed interest (and growing investment) in neuromarketing, all contribute to the panoply of approaches that also includes BT. Behavioral targeting itself has also grown more complex. That modest little "cookie" data file on our browsers, which created the potential for behavioral ads, now permits a more diverse set of approaches for delivering targeted advertising. We are being intensively tracked on many individual websites and across the Internet. Behavioral targeting and related technologies may provide "marketing nirvana," as one company explained, but it leaves consumers unaware and vulnerable to an array of marketing communications that are increasingly tied to our financial and health-related activities.[11]

Advances in the capabilities of digital advertising are being made through a variety of initiatives. For example, Microsoft has established its adCenter Labs, with offices in Beijing, Redmond, and other locations, to work on behavioral targeting and other techniques.[12] Yahoo! Labs in Bangalore works on a number of topics related to "advertising sciences."[13] Google and the leading global advertising company WPP recently established a grant program for academics to "to improve understanding

[8] Catherine Dwyer, "Behavioral Targeting: A Case Study of Consumer Tracking on Levis.com," *Proceedings of the Fifteenth Americas Conference on Information Systems, San Francisco, California August 6th-9th 2009*.

[9] Hallerman, "Behavioral Targeting: Marketing Trends," p. 1.

[10] For a useful online illustration on the data collection and targeting capabilities of online ad networks, see *Advertising Age's* "Ad Networks+ Exchanges Guide. 2009. http://brandedcontent.adage.com/adnetworkguide09/lobby.php?id=2 (viewed 14 June 2009).

[11] "The Rise of On-site Behavioral Targeting," http://www.omniture.com/offer/281 (viewed 14 June 2009).

[12] Microsoft, "adCenter Labs—Innovations in Digital Advertising," http://adlab.microsoft.com/ (viewed 14 June 2009).

[13] Yahoo! Labs Bangalore, "Advertising Sciences," http://bangalore.yahoo.com/labs/asceinces.html (viewed 14 June 2009).

and practices in online marketing."[14] "Topics of interest" for the second round of those grants, according to Google Research, include finding answers to questions such as the following:

- What do we know and what more do we need to know about on-line audiences?
- How can advertisers be welcome in social networks?
- How do teens interact with digital media and what are the implications?
- How can pharmaceutical brands engage more effectively online? How should marketers approach creative development given the full/risk disclosure requirements?
- What are the unique marketing and targeting opportunities for other verticals: financial services, insurance...?[15]

One of the not-so-subtle ironies of the debate about behavioral advertising and privacy is that when marketers are grilled by regulators, they claim BT isn't really targeted to an individual and is relatively harmless. But what they tell each other reveals a technique with a powerful punch. The U.S. Interactive Advertising Bureau (IAB), the industry's principal trade and lobbying group, defines behavioral targeting as "A technique used by online publishers and advertisers to increase the effectiveness of their campaigns. 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 be displayed to that individual. Practitioners believe this helps them deliver their online advertisements to the users who are most likely to be influenced by them."[16]

The IAB and other industry apologists are quick to claim that their various online tracking efforts are strictly "anonymous." Indeed, on its own website, the IAB

---

[14] "Google and WPP Marketing Research Awards Program bestows 11 grants," press release, 18 Mar. 2009, http://www.wpp.com/wpp/press/press/default.htm?guid=%7Be0af399a-8450-408c-8ba8-c35d31dae88c%7D (viewed 14 June 2009).

[15] Google Research, "Google and WPP Marketing Research Awards," http://research.google.com/university/marketingresearchawards/ (viewed 31 Oct. 2009). Advances in digital advertising, through data mining, artificial intelligence, social media "sentiment" analysis, and other means, are supported by online marketers such as Microsoft, Google, and Yahoo at various specialized academic conferences. See, for example, the Third Annual International Workshop on Data Mining and Audience Intelligence for Advertising," 28 June 2009, in Paris, http://adlab.microsoft.com/adkdd2009/ (viewed 14 June 2009).

[16] Interactive Advertising Bureau, "Glossary of Interactive Advertising Terms v. 2.0," http://www.iab.net/media/file/GlossaryofInteractivAdvertisingTerms.pdf. The IAB counterpart in the United Kingdom defines behavioural targeting as "A form of online marketing that uses advertising technology to target web users based on their previous behaviour. Advertising creative and content can be tailored to be of more relevance to a particular user by capturing their previous decision making behaviour (eg: filling out preferences or visiting certain areas of a site frequently) and looking for patterns." Internet Advertising Bureau, "Jargon Buster A-D," http://www.iabuk.net/en/1/glossaryatod.html (both viewed 14 June 2009).

assures visitors that "We may collect information from visitors to our Web site and users of our services in an aggregate, anonymous form, which means that the information will not contain nor be linked to any personal information." But as Prof. Catherine Dwyer, who undertook a detailed case study of behavioral targeting practices on Levis.com, points out, so-called "anonymous" profiling fails to provide the targeted consumer any real privacy protection. "The vast majority of data is collected anonymously, i.e., not linked to a person's name," she explains. "However, behavioral targeting does create digital dossiers on consumers with the aim of connecting browsing activity to a tagged individual. This tagging is largely invisible to consumers, who are not asked to explicitly give consent for this practice. By using data collected clandestinely, behavioral targeting undermines the autonomy of consumers in their online shopping and purchase decisions…."[17] Such targeting, Dwyer suggests, can also undermine consumer confidence in e-commerce: "Not asking for explicit consent, and using anonymity to sanitize the tagging of individuals are components of behavioral targeting that can destroy trust in e-commerce. Even if consumers are anonymous, …advertising networks are silently collecting data to influence their purchase decisions…. Behavioral targeting without consent threatens the autonomy of consumers, and can undermine the trust and expectations of benevolence that customers associate with a name brand."[18]

When they're not posturing about how much they value user privacy, online marketers are quick to tout the power of their profiling technology. In a 2007 presentation to UK advertisers, for example, Yahoo boastfully described its behavioral targeting efforts as a form of "intelligent user profiling." Explaining that it captures user "DNA" from "registration and behaviours" (including online activities such as page views, ads clicked, search queries, and search clicks), Yahoo uses this information to fuel its behavioral targeting.[19] Another company that boasts of DNA granularity in its profiling is Intellidyn, which explains that

---

[17] Catherine Dwyer, "Behavioral Targeting: A Case Study of Consumer Tracking on Levis.com," *Proceedings of the Fifteenth Americas Conference on Information Systems, San Francisco, California August 6th-9th 2009*.

[18] Dwyer, "Behavioral Targeting: A Case Study of Consumer Tracking on Levis.com."

[19] Richard Frankel, "Yahoo! Behavioural Targeting: Intelligent User Profiling Comes to the UK," Powerpoint presentation to the Internet Advertising Bureau-UK, 17 Jan. 2007, http://www.iabuk.net/media/images/_Behavioural_Targeting_Richard_UK_IAB_1469.ppt (viewed 13 Oct. 2008). Frankel explained the process as follows: "We analyzed predictive patterns for purchase cycles in each product category. In each category, we built models to describe behaviour most likely to lead to an ad response (i.e., click). We scored each Y! user for his fit with every category. Re-score daily. Target your ads to users who get highest 'relevance' scores in the targeting categories you choose."

[19] "Behavioural Targeting is the most dynamic way of reaching the right audience online. Through our Behavioural Network, we can target your most valuable visitors across our network, earning you additional revenues…." "Behavioural Targeting," Advertising.com, http://uk.advertising.com/publishers/behavNetwork.php (viewed 13 Oct. 2008).

An individual's distinct consumer marketing DNA and Consumer-Product Relationship are identified through a three step process. To start, customers are profiled and/or prospects are modeled by extracting information about the individuals from the plethora of data sources housed by Intellidyn – hosted sources encompass more than 50 Terabytes of current consumer data spanning over 2,500 attributes.

Consumers are then clustered according to lifestyle habits. Next, working at a very granular level, extensive data about attitudinal, lifestyle, values, passions, and demographics is gathered for each individual. From this data, an individual consumer's marketing DNA is identified. A statistical model is then run to determine the individual's Consumer-Product Relationship, also known as the CPR. The CPR maps the relationship between the characteristics of the product and the consumer's specific marketing DNA. The model, supported by business rules, product attributes and company priorities, identifies the key product messages that will best resonate with that individual. This detailed intelligence is used to generate a matrix mapping each individual consumer's marketing DNA and Consumer-Product Relationship.[20]

"With over 50 Terabytes of consumer data spanning over 2,500 attributes," declares Intellidyn, "we provide the most comprehensive and complete consumer database to support your lead generation, retention and analytics requirements."[21] Behavioral targeting company Audience Science also acknowledges the "massive amounts of data" it has available "to gain consumer insights on an individual level."[22] Or, as InterClick boldly proclaims, "Behavioral Targeting converts online behaviors into actionable data for advertisers by scoring each online consumer's interest and purchase intent based on their recent online behavioral patterns."[23]

In addition to targeting users on particular websites, BT also permits tracking of individual users across hundreds or more sites. One company specializing in such "retargeting" explains that it is "able to deliver your message to visitors after they have left your site as they surf the Web. Your ads will appear to them as they surf their favorite internet sites—everything from popular news sites, social networking sites, to various blogs and informational sites. These are not pop-ups; these are

---

[20] Intellidyn, "I-Distinct: Exploiting the Power of Personalization," http://www.intellidyn.com/downloads/datasheet-idistinct.pdf (viewed 25 Oct. 2009).

[21] Intellidyn, "Direct Marketing Execution from Concept to Results: The Perfect Blend of Art and Science," http://www.intellidyn.com/downloads/datasheet-direct-marketing.pdf (viewed 25 Oct. 2009).

[22] "AudienceScience CEO Hirsch Says Real-Time Bidding Enables True Value in Media," AdExchanger.com, 13 Mar. 2009, http://www.adexchanger.com/ad-networks/behavioral-targeting-audiencescience/ (viewed 14 June 2009). For more examples of behavioral marketing practices, see my blog: http://www.democraticmedia.org/jcblog/?cat=37.

[23] InterClick, "Targeting Solutions," http://www.interclick.com/TargetingOptionsV2.aspx

advertisements that customers would normally see as they visit these webpages; only instead of a random ad being displayed, a targeted ad specifically for them will be shown. Think of it as following a customer out the front door of your store and asking if they saw the sale rack on the back wall. You appear to them again in the right place—at the right time. You will stay top of mind and customers will come back to your site and purchase."[24]

The use of retargeting also raises issues related to potential price discrimination, where certain consumers are offered "better deals" because they are seen as more long-term, lucrative customers. In recent presentations, Datran Media explained that it matches "*verified* offline demographic and lifestyle data with millions of online users" to deliver its targeted advertising.[25] But it also noted that for "Retargeting, Not all customers are equal," describing one consumer in a "low income bracket" who spends only $24.00 over an eight-month period versus "Customer Type B" in the "middle income bracket," who spends $140.00 over three years." Such a system—where one user is determined through a variety of variables to be a better prospect than another and is offered different deals—raises a number of concerns about accountability, transparency, and fairness.[26]

Behavioral targeting is growing. A recent study by Datran Media, which "surveyed more than 3,000 industry executives from Fortune 1,000 brands and interactive agencies, found that 65% of marketers use or plan to use behavioral targeting."[27] More than half of the 1,200 marketers surveyed by Marketing Sherpa said they would increase their spending for behavioral targeting in 2009.[28] BT is expected to become widely used with online video, mobile phones, and online games and virtual worlds, further expanding its data collection and targeting role.[29]

[24] Fetchback, "Retargeting," http://www.fetchback.com/retargeting.html (viewed 14 June 2009).

[25] Scott Knoll, "The Future of Behavioral Targeting," 18 Dec. 2008, http://s3.amazonaws.com/thearf-org-aux-assets/downloads/cnc/online-media/2008-12-18_ARF_OM_Datran_Media.pdf (viewed 14 June 2009).

[26] Knoll, "The Future of Behavioral Targeting." See also "Always Make a Good Impression: Understanding Household & Behavioral Targeting to Maximize Your Media Buys," 1 Oct. 2008, http://success.datranmedia.com/webinars/ (viewed 15 June 2009)

[27] "Datran Media Announces Third Annual Marketing Survey Results," press release, 27 Jan. 2009, http://corporate.datranmedia.com/newsandpress/press.php?id=01272009 (viewed 14 June 2009).

[28] Marketing Sherpa, "New Data: Year-End Survey Shows ROI and Budgets by Tactic," 4 Feb. 2009, http://www.marketingsherpa.com/article.php?ident=31037 (subscription required). Nearly half in this survey said they would spend more on ads fostering greater interactivity (so-called "rich media").

[29] "Behavioral Targeting Ad Spend Poised to Grow, with Help from Online Video" *Marketing Vox*, 23 June 2008, http://www.marketingvox.com/behavioral-targeting-ad-spend-poised-for-growth-with-help-from-online-video-039399/; "Yahoo to Bring Behavioral Targeting to Mobile," *Marketing Vox*, 21 May 2009, http://www.marketingvox.com/yahoo-to-bring-behavioral-targeting-to-mobile-044141/; "Behavioral Targeting in Second Life," Advertising Lab, 28 Apr. 2007, http://adverlab.blogspot.com/2007/04/behavioral-targeting-in-second-life.html (all viewed 14 June 2009).

With this background in mind, we would now like to address the questions posed by the FTC for its series of Privacy Roundtables:

> 1. *What risks, concerns, and benefits arise from the collection, sharing, and use of consumer information? For example, consider the risks and/or benefits of information practices in the following contexts: retail or other commercial environments involving a direct consumer-business relationship; data broker and other business-to-business environments involving no direct consumer relationship; platform environments involving information sharing with third party application developers; the mobile environment; social networking sites; behavioral advertising; cloud computing services; services that collect sensitive data, such as information about adolescents or children, financial or health information, or location data; and any other contexts you wish to address.*

A. The Evolution of Online Behavioral Targeting

Any assessment of the risks of the collection, sharing, and use of consumer information must first acknowledge that the field of interactive advertising continues to evolve, with new developments—from comprehensive and persistent Flash cookies to dynamic "smart ads"—appearing with astonishing regularity. Commenting on this rapidly changing landscape, James Lancelot, director of professional services at Invite Media, observed that

> a major shift is happening currently in the industry away from buying 'inventory,' and moving towards buying 'audiences.' Remarketing and 3rd party data targeted campaigns are driving this shift due to their strong performance and the branding impact of knowing a user's interest or profile…. From a technical perspective, buying audiences means bidding on users, and how you bid on a user is based off of the cookies that have been dropped on that user's computer…. Because the old model of working with multiple ad networks on a given campaign is still very much in full force, and the audience is finite, the 'cookie wars' are ensuing. There are a few large exchanges that a significant number of ad networks work on, and they all bid for the same cookied users.[30]

Competition for the "best cookies," in effect (i.e., the prime prospects for any particular good or service), has become fierce, leading to what Lancelot expects will be even more consolidation within the ad industry—and to more exchange and aggregation of personal data as the control over user cookies falls into fewer corporate hands. As Lancelot explains, marketers are adjusting to fight the "cookie

---

[30] James Lancelot, "Cookie Wars: How Audience Targeting Is Creating Intense Competition For Cookies," AdExchanger.com, 1 Oct. 2009, http://www.adexchanger.com/data-driven-thinking/cookie-wars/ (viewed 23 Oct. 2009).

wars" by joining forces with erstwhile competitors, either though mergers and acquisitions, or through participation in ad exchanges, using "centralized platform buying solutions," or simply by employing more sophisticated analytics. "Agencies are getting much smarter and creating internal teams that manage bids and frequencies universally using such platforms," Lancelot observes. "But there is still a long way to go, a lot of education, and consolidation that will need to happen. As agencies and their advertisers continue to evolve their thinking and strategies, it is going to be an exciting time as buying consolidates and advertisers really start to see strong performance on their campaigns."[31]

A prime example of such concentration of power in the interactive advertising marketplace is DoubleClick's new Ad Exchange, which "includes over 40 ad networks from the U.S. and Europe, including most of the 25 largest ad networks in the U.S.," according to Rachel Nearnberg, an associate in Google's Global Communications and Public Affairs office.[32] Among the participants in the exchange are MediaMath, OMG Digital, Rocket Fuel, Tribal Fusion and VivaKi, placing their ads on such popular sits as About.com and eHarmony. One example of the kind of increasing technological sophistication to which Lancelot referred is the "MathSelect product suite … now embedded into TerminalOne™, MediaMath's industry-leading media and data buying platform, to deliver the efficiency of exchange-based buying with site- and cookie-level targeting precision. Leveraging MediaMath's proprietary data and supply relationships, MathSelect allows agencies to transparently target participating ComScore 250 publishers, contextual channels across top-tier sites and portals, and dozens of demographically- and behaviorally-defined audience segments across more than 10 billion impressions daily."[33] MediaMath is also actively involved in the ad exchange movement: "We have put together a combination of proprietary supply relationships, programmatic buying algorithms, unique data access, elegant workflow tools, transparent reporting, and decades of experience."[34] As a recent entry on the blog of online advertiser Lotame explains, "On one hand there are data exchanges making cookie files or user information available for purchase. On the other hand, there are media exchanges that make media available for purchase letting businesses use primary or secondary cookie files from other sources to make the ad decision…. Data is only as valuable as the intelligence or 'connection' behind it. In the coming months, the companies that are positioned to efficiently collect and segment data and, more importantly, are able to tie that data in a meaningful way to media through enhanced delivery and

---

[31] Lancelot, "Cookie Wars: How Audience Targeting Is Creating Intense Competition For Cookies."

[32] Quoted in David Fidlin, "Google Gets into Ad Swapping," *Digital Media Buzz*, 20 Oct. 2009, http://www.digitalmediabuzz.com/2009/10/google-gets-into-ad-swapping/ (viewed 23 Oct. 2009).

[33] "MediaMath Launches MathSelect to Enable More Efficient Brand Advertising," 16 Sept. 2009, http://www.mediamath.com/pressrelease-MediaMath-MathSelect-Sep2009.html (viewed 23 Oct. 2009).

[34] MediaMath, "The Digital Media Trading Experts," http://www.mediamath.com/ (viewed 23 Oct. 2009).

optimization techniques, will see an increase in sales, margins, and ROI. By valuing audiences and media separately, there is also a new arbitrage opportunity available to those that truly understand the three aspects of data, media, and delivery."[35]

Another company, Demdex, enables online marketers to streamline their data acquisition and exchange processes: "Demdex's turn-key behavioral data management solutions make implementing a behavioral data strategy cost-effective and easy. We empower your company to create a 'Behavioral Bank' full of robust user profiles with data captured from your web properties, purchased from third-party data sellers or exchanges, and generated from your ad campaigns. Your data then seamlessly and easily plugs into all the systems you currently rely upon for ad delivery, optimization, multivariate testing, analytics, exchange bidding, and much more!"[36] Demdex's DexClarity "manages the third party data you buy from data exchanges or other data sellers to ensure you get the maximum benefit from your data. The result is a central repository of behavioral data that will dramatically improve all your targeting, segmentation, or analytic efforts…. Once captured and scored, DexClarity seamlessly and easily plugs this data into all **the channel-specific tools you already rely upon** for media buying and trafficking, ad serving, exchange bidding, creative optimization, analytics and much more."[37]

At the heart of all of this aggregation and optimization, lest we forget, are individual consumers who have no knowledge of either the extent of the online surveillance to which they are being subjected, or the practical effects of that monitoring, including personalized advertising designed to appeal to an individual's needs, interests, and vulnerabilities, and manipulative audience segmentation that attempts to match online content to personal tastes and predilections. Typical of the many audience segmentation services, Exelate "captures information on targeting events, analyzes data relevance and assigns it to one of over a dozen qualified Targeting Segments as either a Demographic, Behavioral or Purchase Intent indicator." Among Exelate's Targeting Segments are demographic ("Registration-based consumer profile information," including age and gender, ethnicity, and marital status), interest ("Users engaged in highly targeted activities that define their interests and personalities," including finance, offer seekers, sports enthusiasts, auto enthusiasts, diet and fitness buffs, and business customers), and intent ("In-market consumers… ready to buy!" including auto buyers, travelers, and a host of shopping categories).[38]

---

[35] Lotame, "The Maturation of Data Intelligence," Lotame Learnings, 27 Oct. 2009, http://www.lotame.com/blog/ (viewed 31 Oct. 2009).

[36] Demdex, "Turn Generic 'Users' into Robust Individual Profiles," http://www.demdex.com/ (viewed 30 Oct. 2009).

[37] Demdex, "DexClarity Behavioral Data Management," http://www.demdex.com/Demdex_advertisers_agencies_DexClarity.html (viewed 30 Oct. 2009).

[38] Exelate, "eXchange Behavioral Targeting Segments: 150M+ UV Strong," http://www.exelate.com/new/buyers-targetingsegments.html. Exelate currently works with over 40 ad networks, optimization firms and media buying and decision engines. Exelate,

Another market intelligence company, [x+1], boasts of its Predictive Optimization Engine (POE) as

> …an audience-based, predictive marketing platform that utilizes automated, real-time decision-making to improve the scale and efficiency of the online marketing process. The first of its kind and six years in development, POE™ … leverages sophisticated mathematical models to make optimal segmentation and targeting decisions on website and in external media campaigns. POE™ derives actionable decisions from massive amounts of complex data…. Using a wide variety of data sources, POE™ profiles end-users and anonymously tracks their online behavior and responsiveness. It then identifies patterns in visitor characteristics and their response activity and ultimately determines the best content and offer to display.[39]

Rubicon Project, similarly, promises to "Drive business intelligence and ad sales revenue with deep insights into your audience's interests and behavior (music fans, sports enthusiasts, etc.).

Features:
- Identify your audiences' top affinities
- Full transparency into depth of data per user
- Visibility into the advertising segments of greatest interest to your audience

What this means for you:
- Leverage Insight to precisely target and sell your users across your sites
- Use Insight in conjunction with the Targeted Audience program to sell specific audience segments on your sites for premium rates, and to sell your audience and other users just like them across the web to your premium advertisers
- Make better business decisions around content, marketing and ad sales with Insight data.[40]

The degree to which targeted marketing has become automated is clear in Tumri's promise to bring "scalable, automatic personalization of media to consumers….

Advertisers/Agencies: Ad Network Partners," http://www.exelate.com/new/agencies-adnetworkpartners.html (both viewed 23 Oct. 2009).

[39] [x+1], "Our Technology," http://www.xplusone.com/solutions/technology.html. For a list of the data that [x+1] uses for its analyses, see [x+1] "Data Dictionary," http://www.xplusone.com/resources/files/Collateral_x+1_Data_Dictionary.pdf (both viewed 23 Oct. 2009).

[40] Rubicon Project, "Audience Insight," http://www.rubiconproject.com/REVV/revv-product-suite/audience-insight/ (viewed 23 Oct. 2009).

Across traditional web sites, social networks, and the incredible amount of user-generated content that users interact with daily, consumers' unique needs and personalities are reflected in the content of the pages they visit, the context of their visits, and the aggregated behavior pattern they demonstrate online. Given the power of the Internet, marketers and content developers can reach consumers using measurable dialogs across all online channels—web sites, advertisements, email, widgets, instant messaging, and many more. At Tumri, we believe that relevant content can be delivered to consumers by combining:
- the sciences of predictive machine learning and massive algorithmic performance optimization, with
- the art of creative marketing and messaging….

Every Tumri AdPod impression brings the following underlying technology components to bear to satisfy the goals of media optimization:
- A Matching Engine whose purpose is to bring high levels of consumer relevance
- A Presentation Engine that is appealing, interactive and highly dynamic
- A high performance Semantic Listings Processor & Search Engine
- An Optimization and Decision Support System which is constantly evolving
- A scalable Real-Time Analytics and Feedback system
- An Open Platform that allows standards based integration with the advertising ecosystem.[41]

Such technology enables Tumri "to dynamically create highly targeted advertising messages on-the-fly," and forces consumers to confront a sophisticated interactive advertising system that is non-transparent and fails to ensure personal choice and control.[42] With its Smart Ads, Yahoo offers similar functionality, providing "advanced targeting capabilities to identify in-market consumers and individual interests. Yahoo!'s Smart Ad technology provides real-time personalization of offers that match the right offer to the right customer at the right time. Smart Ads deliver… [the] right message to distinct user groups based on targeting such as behavior, demo, geo, lifestyle and more"[43]

The focus of the latest interactive advertising, in other words, has shifted from finding the prime virtual real estate on which to plaster one's messages, to identifying the specific consumers most likely to be receptive to those messages. "The idea of buying audiences and not inventory is a new way of operating and has

---

[41] Tumri, "Overview," http://www.tumri.com/technology/ (viewed 24 Oct. 2009).

[42] Tumri, "Advertiser: How it Works," http://www.tumri.com/advertisers/ (viewed 24 Oct. 2009).

[43] Yahoo Advertising, "Smart Ads," http://advertising.yahoo.com/smartads (viewed 24 Oct. 2009).

delivered us great results," explains Bill Capodanno, director of customer experience architecture at Microsoft.[44] And the secret to finding those individuals is the collection and analysis of personal profiles. "Data is key," observes Quentin George, CEO of Interpublic Group's Cadreon digital ad network. The more data the client shares, adds George, "the more narrowly we can define the audience. Other networks are geared toward delivering yield for publishers. The only thing we care about is performance for the advertiser."[45] And as Havas Digital makes clear with its Artemis marketing decision support system, such audience definition can be carried down to the level of the individual user:

> Unlike some of the less sophisticated reports advertisers may receive from ad-servers, for instance, Artemis® provides detailed reporting right down to the user level. While we never store personally-identifiable information (we take privacy very seriously), tracking at this level provides greater insight and return on investment.
>
> Ever wondered:
> - Which creative is most effective at reaching—and converting—your desired audience?
> - How many impressions you ideally need to generate a visit to your site?
> - What are the cross-effects between your search and ad campaigns?
> - How much of the traffic your ads generated is from returning customers vs. a new audience?
> - What string of keywords consumers click on before eventually converting on your site?
>
> Artemis® can answer all these questions—and more—which means less time planning and more time optimizing! It's also flexible and fully customizable for unique advertiser needs.[46]

Among the sources of data on consumer behavior online is BlueKai, "the largest source of shopping data across the Internet."[47] BlueKai's "core focus is on aggregating valuable 'commercial intent' data and making it available at scale for effective in-market targeting across the Internet. We currently have access to over

---

[44] Quoted in Steve McClellan, "IPG Unveils Cadreon Digital Ad Network," *AdWeek*, 30 May 2009, http://www.adweek.com/aw/content_display/news/e3ic0507728e66c92e381888dddb7a62749 (viewed 24 Oct. 2009).

[45] Quoted in McClellan, "IPG Unveils Cadreon Digital Ad Network."

[46] Havas Digital, "Artemis: Empowering Data Intelligence," http://www.havasdigital.com/artemis.html (viewed 24 Oct. 2009).

[47] BlueKai, "Ad Networks and Publishers," http://www.bluekai.com/data-buyers-networkpub.html (viewed 24 Oct. 2009).

120 million unique shoppers across our core retail, auto and travel data categories."[48]

Armed with such detailed and comprehensive consumer information, many online marketers tread a thin line between behavioral targeting and behavior modification as they sharpen their powers of persuasion with new personalization and predictive techniques. As Stratigent CEO Josh Manion explains, "Behavioral targeting is a largely automated means of creating a more personalized web site experience by observing the visitor's onsite behavior and then leveraging that data to target them with online creative and offers that are most relevant to them. The theory is that by presenting each individual user with a personalized optimal experience, it will increase their likelihood of taking the desired action such as making a purchase, signing up for a free trial service or perhaps filling out a contact form."[49]

In a similar fashion, Bunchball's Nitro claims to "leverage human desires…. People have fundamental needs and desires—for reward, status, achievement, self-expression, competition, and altruism among others. These needs are universal, and cross generations, demographics, cultures and genders. Is your website doing anything to address these needs? Most aren't. There's a secret, and game designers have known it for years. There are mechanics that you can use to address these needs, and in the process incent, motivate and engage your users."[50]

ValueClick Media introduced it Precision BT behavioral targeting technology last year, whose "Precision Profiles tool uses the databases of ValueClick and its clients to fuel algorithms that determine the likelihood that an online consumer will behave a certain way or be interested in a certain offer. Consumers are segmented based on a variety of data and can belong to more than one segment at a time. 'ValueClick has amassed a critical mass of consumer information and is enriching these consumer profiles through relationships with custom third parties,' explained Joshua Koran, VP of targeting and optimization for ValueClick. 'Precision BT takes in these inputs, applies meaning to them, and then, through predictive algorithm, guesses which visitors are in which interest segments. Then our ad server identifies the best context through which to reach those visitors.'"[51] Q Interactive offers a similar predictive tool, the TrueConversion Engine, which

---

[48] BlueKai, "BlueKai Data," http://www.bluekai.com/intent-data.html (viewed 24 Oct. 2009).

[49] Josh Manion, "Onsite Behavioral Targeting," http://www.stratigent.com/web-sight-newsletter/web-analytics-newsletter-archive/onsite-behavioral-targeting/default.html (viewed 23 Oct. 2009).

[50] Bunchball, "How Nitro Works," http://www.bunchball.com/products/nitroworks.shtml (viewed 24 Oct. 2009).

[51] Lauren Bell, "ValueClick Adds to Behavioral Targeting Capabilities," *DMNews*, 24 July 2008, http://www.dmnews.com/ValueClick-adds-to-behavioral-targeting-capabilities/article/112914/ (viewed 24 Oct. 2009).

uses a combination of offline data and online self-reported geo-demographic, behavioral and transaction-based data to proactively predict which consumers are most likely to respond to an advertiser's banner and rich media ads…. The company's transaction-based behavioral data, for instance, is garnered from consumers' actual responses to advertiser offers across multiple touch points—Q Interactive's three network service lines, registration path-lead generation, email and now display. Further, Q Interactive's geo-demographic data is self-reported, which is more accurate in predicting response than the inferred data used by other networks, which, for example, may assume a consumer is a man because he or she has visited a sports-oriented site."[52]

Wingify touts its ability to be equally flexible in its approach to BT, offering "real time targeting which automatically adapts according to visitor behavior.

> Your website visitors evolve as they interact with your website. So, your targeting should evolve as well. An individual website visitor may belong to multiple of your targeted segments. He may evolve from being a mere explorer to a likely purchaser; or his interests may shift with time. With Wingify, you can track a website visitor, and target what is most appropriate for him at the moment. Based on website and business objectives, you can setup different types of targeting strategies using Wingify:
> - **Behavioral targeting**: using short term and long term interests, predict next likely action and present customers with most compelling offer
> - **Daypart targeting**: targeting based on time of day and day of week. Website visitors who see an ice-cream ad are most likely to click it (and buy an ice-cream online) during noon. Similarly, customer behavior is drastically different on weekdays than weekends
> - **Geo-targeting**: present content customized according to city, country and preferred language. Localized content and advertisements improves conversions tremendously
> - **Re-targeting**: if a customer abandons the purchase of a product, he is targeted to buy the same product (with a discount) on his next visit
> - **Email targeting**: predict which customers are likely to churn, offer them discounts. Predict which customers are likely to buy another product, up-sell and cross-sell them in advance
> - **Affinity targeting**: a website visitor reveals a lot about his interests in the first few pages he chooses to visit. Target him on his affinity to your website categories

---

[52] "Q Interactive Launches Predictive Behavioral Ad Network," 3 Sept. 2008, http://www.qinteractive.com/pressSingle.asp?rId=146 (viewed 24 Oct. 2009).

- **Recency, Frequency and Monetary (RFM) targeting**: target your most recent, most frequent and most monetary profitable customers as they are most valuable for your business
- **Referral targeting**: visitors from organic searches bounce a lot often than direct hits. Don't loose them, they are valuable
- **One-to-one (personalized) targeting**: Instead of manually defining segments and targeting them, offer an automatically generated personalized experience to your website visitors

Wingify allows you to define visitor segments for targeting and then can easily setup multiple flexible rules for displaying website content according to the segment of the visitor:
- **Real-time Targeting**: visitors keep changing intensions as they interact with your website. They evolve from freshly arriving on your website, browsing, spending some time on it, revisiting later, and finally making a purchase. Using Wingify, you can target content to the visitor during his different stages of evolution, all in real time
- **30+ Targeting Metrics**: use many different metrics for targeting visitors. Target them based on their geo-location, frequency, loyalty, goals completed (such as purchases, signups, newsletter read, etc.), time spent, website categories browsed, exit page, search keywords, split test version assigned, etc.
- **Zones and Campaigns**: define parts of your website as zones, whose content will be targeted according to the type of visitor. Run campaigns targeted to particular visitor segments

Testing of Targeting Creatives: if you are unsure which content would work best for a particular segment of visitors, test different variations of to know the best performer and then implement targeting on your website.[53]

Consumers need to know, and should have the right to approve, the marketing segments into which they have been placed. Adchemy, for example, "[a]utomatically delivers highly customized marketing to audience micro-segments. Instead of treating all audience members the same, the Adchemy Audience Management Platform allows marketers to micro-segment their audience members. At every level of the digital marketing funnel, the platform then dynamically serves the most relevant and consistent marketing content for each audience micro-segment."[54] This is a service, moreover, that clearly traffics in highly personal information: "Adchemy Actions engages, attracts and qualifies consumers for marketers in multiple

---

[53] Wingify, "On-site Behavioural Targeting," http://www.wingify.com/product/onsite-behavioural-targeting.php. See also Wingify, "List of Metrics for Segmenting, Targeting and Reporting," http://www.wingify.com/product/documentation/metrics-behavioral-targeting-optimization-segments.php (both viewed 14 Oct. 2009).

[54] Adchemy, "Adchemy Audience Management Platform," http://adchemy.com/platform/ (viewed 26 Oct. 2009).

industries, including career education, insurance, mortgage, credit cards, other financial services and lifestyle services. Marketers can engage with consumers on a clicks, leads or actions basis."[55]

Such "engagement" has long been one of the keys of online advertising, and in its latest incarnation that engagement has become even more engaging—if not, in fact, *ensnaring*—than ever. Alterian, for example, integrates online and offline consumer data to design a more engaging online experience. "As Alterian develops the Customer Engagement Cycle technologies, through the next year we will be releasing a number of products that extend our offline marketing database, analytics and execution capability fully into the online space and, in doing so, make the individual coming to the website addressable for the marketer in terms of the customization of the website for that individual."[56] As Alterian's Michael Fisher explains,

> Data-driven communication requires the assembly of data in a way that provides for a holistic, 360° view of the customer. Such a view should include the linkage of online and offline data including behavioral data from vertical offline sources as well as behavioral online, email and web data. The assembly of this data allows for a brand to engage a customer in an intimate, interpersonal way that when used properly can deliver engaging customer experiences. Customer Engagement Agencies recognize the need for such linkages to exist, and have effectively tied multitudes of data sources together, manufactured unique data elements that present effective points of leverage for their customers and created holistic views of the customer, thus enabling them to create engaging customer experiences.[57]

Mark Wright, president of Targetbase, is a firm believer in this personalized approach to online marketing. "We're in the customer engagement business," he declares; "we leverage data from as many sources as we possibly can, including the rich data that we now are able to collect from the web to drive actionable insights on our clients' consumers. We leverage these actionable insights to create customized, relevant experiences for our client's consumers which yield explosive results for our customers across all channels."[58]

Collective Media sounds a similar theme: "By leveraging partner Personifi's context targeting and powerful taxonomy, Collective Media is able to offer advanced audience behavior targeting.

---

[55] Adchemy, "Adchemy Actions," http://adchemy.com/actions/ (viewed 26 Oct. 2009).

[56] Alterian, "The Engagement Journey—Our Vision," http://www.alterian.com/engagement/the_engagement_journey.aspx (viewed 24 Oct. 2009).

[57] Michael Fisher, "The Emergence of the Customer Engagement Agency," 2009.

[58] Quoted in Fisher, "The Emergence of the Customer Engagement Agency."

Here's how we offer unparalleled behavioral targeting:
- **Collective Media tracks frequency and recency** of past visits to assign a behavior segment to a user.
- **Collective Media then targets these users** across our network of publishers to extend reach to any audience segment.
- **Understanding people's interests** and actions allow us to reach them at just the right time, place and with the most appropriate message.[59]

More to the point, all of this tracking and targeting activity is now taking place in real time. "Our business model from Day One was to build a machine that can be better, faster, stronger at figuring out how to understand what consumers are interested in and what they will respond to," observes Rocket Fuel President Rich Frankel. "…It's not about behavioral data for us. It's not just behavioral, but social data and search data and contextual data and time of day, the weather, when it rains, etc.… Our hypothesis was that there is no single silver bullet. For some ads, some campaigns work better on certain days of the week or in some states. Search data might be the answer for one bit of the audience and behavioral for the other. But if you add them up and layer them on top of each other, you can build a better story for every ad for every person on every page for every minute."[60]

In August Rocket Fuel launched "its intelligent ad serving platform that drives results for advertisers by automatically leveraging massive amounts of internal and third-party data and serving only the best impressions in the context of each advertiser's unique marketing objectives. Rocket Fuel is using its technology to run a hybrid ad network that combines the best of social, behavioral, contextual, search and many other data sources to understand consumer interest and intent…. The Rocket Fuel platform goes beyond behavioral, contextual or geo-targeting by combining data mining algorithms, artificial intelligence and expert analysis to customize every campaign and drive results for advertisers. Using its real-time Progressive Optimization™ technique, Rocket Fuel is able to use rapid automated testing and user-level targeting to adjust campaigns around the clock, boosting campaign performance in hours instead of the weeks or even months it would take to pour through the data manually."[61] As Rocket Fuel tells its prospective clients, "We can zero-in on your customers based on age, gender, profession, ethnicity, and relationship status; people actively in purchasing mode; users engaged in highly

---

[59] Collective Media, "Targeting," http://www.collective.com/targeting (viewed 24 Oct. 2009).

[60] Quoted in Steve Smith, "The Value of the New Machine," *Behavioral Insider*, 23 Oct. 2009, http://www.mediapost.com/publications/?fa=Articles.showArticle&art_aid=116020 (viewed 24 Oct. 2009).

[61] "Rocket Fuel Inc. Launches Intelligent Ad Serving Technology Platform," 17 Aug. 2009, http://www.marketwire.com/press-release/Rocket-Fuel-Inc-1031273.html (viewed 24 Oct. 2009).

targeted activities that define their interests and personalities; and people with affinity to your customers."[62]

Microsoft's "behavior-Based Media Planning" product promises equally fine-grained results, using "actual customer behavior to identify the best media opportunities":

> Marketers have long depended on demographic and psychographic profiles when planning advertising campaigns. After profiling their target audience by factors such as age, income, gender or attitudinal profiles, advertisers use various planning tools to find the media channels that will most effectively reach them. A plethora of simple and sophisticated statistics is available to help this process…. However, a new planning method called *Behavior-Based Media Planning* (BBMP) takes a completely different approach, basing site recommendations instead on where actual customers are on the Internet….
>
> BBMP ignores traditional demographic and psychographic definitions. Rather than defining a target group by age, gender or income, behavior-based profiles are created by identifying users who have actually performed a desired action or set of actions. Thus, instead of making best guesses as to who is visiting your site, registering for newsletters and sweepstakes, playing games, or purchasing online, BBMP identifies users that have actually performed such actions. BBMP then seeks to identify the placements across the Web that have the highest concentrations of these same target users…. Rather than building a model of your customers, your customers are your model. No abstraction step is necessary.[63]

B. Aggregation and Exchange of Personal Data

The online advertising business has witnessed dramatic consolidation over the last several years; major interactive giants have swallowed leading behavioral targeting and other data targeting companies. Google now operates DoubleClick; Yahoo acquired Blue Lithium and Right Media; Microsoft bought aQuantive, Screen Tonic and ADECN; Time Warner's AOL acquired Tacoda and Third Screen Media; WPP took over 24/7 Real Media; Adobe acquired Omniture; Publicis will soon own Razorfish; and Microsoft and Yahoo have a proposed partnership in search. As a consequence of consolidation in the online advertising arena, a tiny handful of companies engaged in data collection that track, profile, and target users across websites, mobile applications, online games, virtual worlds, and search engines are playing an important role shaping the Internet's future. Given the tremendous data

---

[62] Rocket Fuel, "Audience Booster," http://rocketfuelinc.com/downloads/Audience%20Booster.pdf. See also, Rocket Fuel, "Rocket Fuel retargeting Booster," http://rocketfuelinc.com/html/technology/retargeting_booster.html (both viewed 24 Oct. 2009).

[63] Young-Bean Song, "Behavior-Based Media Planning," Atlas Institute Digital Marketing Insights, http://www.atlassolutions.com/uploadedFiles/Atlas/Atlas_Institute/Published_Content/Behav-Bsd%20Media%20Planng.pdf (viewed 31 Oct. 2009).

collection capabilities inherent in digital marketing, and the growing concentration of influence by a few, the need for regulatory or legislative action to protect consumer privacy is manifest.

In the absence of such safeguards, online advertisers will continue to strip-mine consumer data, developing increasingly detailed user profiles and sharing their findings with partners and affiliates. "Netmining's proprietary self learning algorithms," for example,

> measure a wide variety of data to develop deep qualitative profiles and calculate a site visitor's True Interests, as well as his or her propensity to buy right now. This allows marketers to more accurately target key customers with messaging, interactions and advertising that dynamically update with pricing, product or other targeted information based on each customer's unique interests at a given time.
>
> Information sources used to calculate True Interest include:
> - Search queries
> - Pages visited
> - Time spent on page(s)
> - Recency of visits
> - Frequency of visits
> - Past purchase history
> - Aging curve for each product
> - Click path value
> - Demographic data
> - Propensity to buy"[64]

Netmining's one-to-one communications platform is based on a simple Who ("Identify prospects with greatest propensity to buy"), When ("Determine the exact moment when prospect is most open to engage"), What ("Offer the product or services each prospect is most intent on buying…"),and How (Offer the right interaction channel possibilities") format.[65]

Industry analysis of ad campaign performance is fast becoming a digital dragnet that lays bare the online interactions and inferred interests of unsuspecting consumers. Dynamic Logic's AdIndex Connects product provides "clients with a complete suite of ROI ad effectiveness solutions covering brand impact, post-view behavioral impact and offline sales impact. Through our partnership with sister company Compete, AdIndex brand metrics are brought together with behavioral data, revealing how consumers search and engage on the Web following exposure to an

---

[64] Netmining, "How it Works," http://www.netmining.com/how-it-works/ (viewed 22 Oct. 2009)

[65] Netmining, "How it Works."

ad." In the process, marketers gain insight into a number of consumer behavior metrics, with answers to the following questions:

- Did my overall campaign drive key *online behaviors*?
- Did it impact search behavior?
- Dit it result in more visits to my website? Other websites?
- What behaviors resulted following exposure (sales, brochure downloads, research, etc.)?
- Did certain behavioral segments respond differently? What are the profiles of those consumers who took action?
- Which creatives had more impact on online behavior? Which behaviors?[66]

Teracent, meanwhile, offers analytics "at the following levels of detail:

- Performance Metrics—advertisers can track clicks, ad interactions, conversion, and order value.
- Templates and Elements—advertisers can track performance at the level of ad templates or layouts as well as dynamic elements such as marketing message, product offer, and images.
- Targeting Inputs—reports can be broken down by various targeting inputs such as site, behavior, demographics, and geography.[67]

Comcast, similarly, used Nitro "to increase page views and advertising impressions, and to increase the number of Comcast subscribers who were registering and logging in to Comcast.net, rather than surfing anonymously. The Nitro program on Comcast.net has been successful and can be clearly tied to metrics-driven results, including high member conversion and an increase in page views per unique visitor."[68] These metrics, in turn, are also used to segment users into increasingly detailed consumer niches. For example, "interCLICK's innovative behavioral targeting filters allow you to target the right individual users at the right time, increasing the effectiveness of your campaigns. With over 350 behavioral categories, interCLICK can get as precise as you want. We segment users based on observed behaviors into 3 interest levels: slightly, moderately and very. Furthermore we use frequency and recency to classify these interest as short, mid, or long term interests. As the user navigates throughout our network of sites, we continually adjust their profile based on anonymous observations, assuring the accuracy of our profiles."[69]

---

[66] Dynamic Logic, "AdIndex," http://www.dynamiclogic.com/na/products/AdIndex/ConnectsWithCompete.php (viewed 23 Oct. 2009).

[67] Teracent, "Analytics," http://www.teracent.com/tracking.html (viewed 26 Oct. 2009).

[68] Bunchball, "Success Stories: Comcast," http://www.bunchball.com/customers/comcast.shtml (viewed 24 Oct. 2009).

[69] InterClick, "Behavioral Solutions," http://www.interclick.com/BehavioralV2.aspx (viewed 25 Oct. 2009).

Increasingly, these various targeting and profiling processes are carried out on the fly, thanks to sophisticated automation and optimization technologies. "The DataXu platform," for example, "enables advertisers to measure, analyze and optimize digital media across the ad exchanges of Google, Yahoo and others. Unlike any other online advertising service, the DataXu platform values, bid manages and buys each ad impression individually, making real-time decisions on each ad opportunity, as it occurs. With the ability to process hundreds of thousands of 'ad decisions' a second—each returned in under 100 milliseconds—DataXu produces higher returns on media investments and lowers media costs by eliminating unnecessary impression spend."[70]

"Teracent's Intelligent Display Advertising," similarly,

> uses sophisticated statistical machine learning principles to determine the optimal selection of each dynamic element within the ad, based on what is known about the impression and the user, as well as historical performance. All available impression and user inputs—such as behavioral, demographic, contextual, and geographic—can be used to drive performance prediction. The Teracent Optimization infrastructure incorporates innovative "aging" models and learning acceleration algorithms to address longstanding marketing challenges. The optimization infrastructure is designed to maximize flexibility allowing algorithms to be configured to the marketer's specific campaign objectives and strategies.

> The Teracent Optimization infrastructure is configurable across the following dimensions:
> - Objective—optimization is configured to maximize click-thru rate, interaction rate, or conversion rate depending on campaign objective.
> - Ad Strategy—ad selection can be driven by business rules, optimization or both depending on the configured ad strategy.
> - Targeting Input—optimization can be configured to learn on all or specified targeting inputs.[71]

Tatto Media, the third-largest global advertising network, offers its clients a service that it touts as "Intelligent Demographic and Behavioral Targeting":

> Each day, Tatto's targeting technology grows more intelligent as more users interact with its advertisements. Proprietary tracking technology of this data allows Tatto to increase the average length of user information from one

---

[70] "DataXu Launches the First Real-Time Optimization Platform for Advertisers: Havas Digital Chooses DataXu as Optimization Partner," 15 Sept. 2009, http://www.dataxu.com/news/sample.php (viewed 25 Oct. 2009).

[71] Teracent, "Optimization," http://www.teracent.com/optimization.html (viewed 26 Oct. 2009).

month to over one year. The technology consistently develops user profiles that enable it to learn which user demographics and psychographics are most likely to provide value to an advertiser. The smart ad serving technology intelligently applies this knowledge on-the-fly. This produces maximum value—providing publishers' users with perfect advertisers' advertisements.[72]

According to a *Behavioral Insider* interview with Tatto CEO Lin Miao,

> When Tatto began to develop its core behavioral frameworks and algorithms, it believed Flash cookies would remain the best way to slow the ability of consumers to delete cookies from their computers. Flash cookies are no different than regular cookies in terms of user privacy, but on average remain on a person's computer for more than three months.
>
> Miao believe three months is enough time to accurately retarget consumers based on proprietary behavioral algorithm. Three months provides enough history as to what types of advertisements consumers may respond to, and how often they click or respond to certain ads. He has no doubt ad networks will turn toward Flash cookies in the future as a way to compete and gather the most relevant and precise information.[73]

Not only are consumer data assiduously collected and mined, they are also being shared more efficiently, thanks to technology such as Teracent's, which

> takes retargeting to the next level, powering digital co-operative marketing programs through our new Digital Endcap solution. Put your valuable customer data and impressions to work by sharing retargeted customer impressions between marketing partners; providing co-op campaigns with advanced targeting precision and customer insight to drive more relevant product ads in real-time.... Teracent's Digital Endcap platform makes digital co-op a reality by allowing market- ing partners to efficiently leverage data feeds and co-op creative assets to optimize customized ads in real-time, while our central ad creation and delivery engine does all the co-op management and merchandising work![74]

Among the benefits of such cooperative campaigns, according to Teracent, is

---

[72] Tatto Media, "Real Advertising Technology Producing Guaranteed Results," http://www.tattomedia.com/advertisers/technology.php#targeting (viewed 26 Oct. 2009).

[73] Laurie Sullivan, "Moving Flash Cookies into Direct-Response BT," *Behavioral Insider*, 16 Sept. 2009, http://www.mediapost.com/publications/?art_aid=113594&fa=Articles.showArticle (viewed 26 Oct. 2009).

[74] Teracent, "Digital Endcap Solution," http://www.teracent.com/images/Teracent_DigitalEndcap.pdf (viewed 26 Oct. 2009).

increased knowledge of customers and insight on what is driving local sales. Those sales, it should be noted, are now being stimulated and orchestrated across a range of platforms. The monetization of our data and online behaviors is now being carried out in marketplaces that so far have been operating without the scrutiny of regulators or Congress. As *BusinessWeek* explained, "ad exchanges are sort of like stock exchanges for online ads. Web sites put ad space up for auction, and ad agencies, armed with demographic and behavioral data about the people who visit those sites, bid to place ads for their clients' campaigns."[75] Google, Yahoo, Microsoft, and others run such exchanges. Microsoft's AdECN ad exchange describes its process as follows:

> Advertisers… specify in advance the targeting they want, and how much they are willing to pay when such an opportunity comes up. That's their bid. The action starts when a viewer lands on a website page. That triggers a single-pass auction among all of the interested advertisers. In about 12 milliseconds—as the page is loading—we run the auction, the highest bidder wins, and we show that ad…. The advertiser knows that his ad is going to be shown on a page or a site with certain content, or at a certain time, or to a person with a certain profile, and so on…. We also offer behavioral, including a viewer's recent search queries, and profile-based targeting: age, gender, income…. We cull [profile data] through relationships with our partners. Here's how it works: when a viewer lands on a webpage in the exchange, we can tell if that viewer is known by one of our partners. If so, we query the partner, who tells us about that person….[76]

According to a *Behavioral Insider* report, Microsoft's ad targeting "cuts across the Web, mobile and Xbox platforms when consumers sign into their Windows Live account. It allows media buyers to purchase consumer profiles demonstrating interest in specific categories, as well as specific times in a purchase funnel. The technology doesn't rely on cookies, but rather the user's Windows Live ID…. Although tight-lipped on Microsoft's strategy, [Microsoft's Jamie] Wells admits 'this is just the beginning.' Microsoft plans to expand its approach to tie together the Web, mobile and Xbox, drawing on the power of the entire Microsoft network."[77]

---

[75] Robert D. Hof, "Google's Grab for the Display Ad Market," *BusinessWeek*, 11 June 2009, http://www.businessweek.com/magazine/content/09_25/b4136052151611.htm?campaign_id=rss_daily (viewed 15 June 2009).

[76] AdECN, "FAQ: The Auction," http://www.adecn.com/faq_3.html; AdECN, "FAQ: Targeting," http://www.adecn.com/faq_4.html (both viewed 15 June 2009).

[77] Laurie Sullivan, "Microsoft Links Behavioral Targeting Across Web, Mobile, Xbox," *Behavioral Insider*, 23 Sept. 2009, http://www.mediapost.com/publications/?fa=Articles.showArticle&art_aid=114165 (viewed 26 Oct. 2009).

C. Mobile Tracking of Consumers

Many of the same consumer data collection, profiling, and behavioral targeting techniques that have raised concerns in the more "traditional" online world have been purposefully brought into the mobile phone marketplace. Thanks to companies such as Mobclix, "the industry's largest targeted mobile ad exchange," the two worlds are coming together. Having struck a partnership with ad networks Advertising.com and Traffic Marketplace, Mobclix provides Internet marketers with direct access to mobile audiences. "For the first time, online ad networks have instant access to mobile inventory and can provide a one-stop shop for digital media buys," explains Mobclix co-founder Krishna Subramanian. "In creating a simple and seamless solution, we hope to encourage more advertisers and agencies to make mobile an integral part of their campaigns."[78] In the process, Mobclix will be helping these advertisers zero in on mobile consumers: "We have the largest pool of aggregate mobile data available," the company boasts. "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."[79]

Mobile marketers in the U.S. are already deploying a dizzying array of targeted marketing applications, involving so-called rich media, mobile video, branded portals, integrated avatars that offer "viral marketing" opportunities, interactive and "personalized wallpapers," "direct-response" micro-sites, and a variety of social media tracking and data analysis tools. And behavioral targeting is swiftly migrating to the mobile world. Mobile devices, which know our location and other intimate details of our lives, are being turned into portable behavioral tracking and targeting tools that consumers take with them wherever they go. Enpocket, a leader in "intelligent mobile marketing" owned by Nokia, provides a sobering example of the potential of this medium for behavioral targeting. Enpocket has developed a "Personalization Engine," which it described as "a system of analytical models that scores mobile users based on their past behavior. It enables us to predict which products and services a customer might purchase next. That way, we can provide the right message, advertisement or promotion to the right person at the right time. It can also forecast events, such as customer churn and will recommend effective customer engagements to preempt attrition. When integrated with the Marketing Engine, the result is highly relevant marketing messages, personalized recommendations, less churn, and higher sales of mobile consumables."[80]

---

[78] "Mobclix Shatters Barrier Between Online and Mobile Advertising," 26 Oct. 2009, http://www.marketwire.com/press-release/Mobclix-1064984.html (viewed 29 Oct. 2009).

[79] Mobclix, "Amazing Engagement for Advertisers: Audience Segments & Rich Media Ads…," http://www.mobclix.com/advertiser (viewed 29 Oct. 2009).

[80] Enpocket, "Advanced Profiling and Targeting," http://www.enpocket.com/solutions/enpocket%20platform/advanced-profiling-and-targeting (viewed 1 July 2008).

U.S. consumers will increasingly rely on their mobile devices for a wide range of services, including sensitive transactions related to finance and health. Thus we should not permit the expansion of behavioral targeting into the mobile world (where it will be combined with precise location information and history) without strong privacy safeguards in place.[81] Google has already staked its claim in the mobile universe. According to *AdWeek*, "The company has begun to focus on mobile on multiple fronts: with its Android operating system, extending its AdWords network to the device and through mobile-specific applications. It is now adding measurement to the mix. As part of an upgrade to Google Analytics, the Internet giant is adding the ability for its customers to track their traffic to both mobile sites and applications, breaking out the devices being used. The idea is to give marketers one place to track digital campaigns, whether they're on the Web or mobile…. The mobile-tracking features are part of a broader update to Google Analytics that includes the ability to set and track engagement goals, add customized audience segments, track unique visitors for segments and set 'intelligence alerts.'"[82]

"In addition to expanded mobile reporting capabilities," notes *Mobile Marketing Watch*, "iPhone and Android mobile application developers can now also track how users engage with apps, just as with tracking engagement on a website. What's more, for apps on Android devices, usage can be tied back to ad campaigns: from ad to marketplace to download to engagement."[83]

As mobile marketer Apptera explains, "Unlike other forms of advertising (such as TV, radio, direct mail, banner ads, keyword ads or billboards), voice ads are achieving unprecedented response rates because:

- Callers have implicitly opted-in
  - Thus, their "mental door" is unlocked

- Callers are actively listening
  - So you have their undivided attention

- Ad delivery can be targeted and scheduled on a granular level

---

[81] For a review of the state of mobile marketing, behavioral targeting and related concerns, see 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, 13 Jan. 2009, http://www.democraticmedia.org/current_projects/privacy/analysis/mobile_marketing (viewed 15 June 2009).

[82] Brian Morrissey, "Google Wades into Mobile Analytics," *AdWeek*, 20 Oct. 2009, http://www.adweek.com/aw/content_display/news/digital/e3i074c92d847489869ac8f25160902c c80 (viewed 23 Oct. 2009).

[83] "Google Expands Mobile Reporting In Analytics," *Mobile Marketing Watch*, 22 Oct. 2009, http://www.mobilemarketingwatch.com/google-expands-mobile-reporting-in-analytics/ (viewed 23 Oct. 2009).

- Targeting based on gender, location, and interests
- Scheduling based on day- of-week and time-of-day

- Voice ads are interactive
  - Dynamically send text messages containing coupons, driving directions and links to mobile sites
  - Route callers directly to your call center.[84]

Another company working to help traditional online advertisers to "break the mobile barrier" is Acxiom, with such products as Acxiom Impact-X™ Mobile ("a dedicated mobile marketing platform for highly targeted, triggered and lifecycle SMS messages") and Acxiom Impact-X™ Email - Mobile Messenging (which "seamlessly integrate[s] mobile marketing strategies into any Impact-X Email campaign").[85] A mobile agency called 5th Finger, meanwhile, monitors the response of mobile users to such advertisers: "… for every mobile campaign, we track, measure and compile information on responsive consumers. These reports give us the information we need to optimize campaigns in real-time and keep up with evolving consumer behavior."[86] And Millennial Media's MYDAS Audience product, with targeting options that include "channel, country, carrier, device, custom subnet, demographic, geographic, location and custom audiences," makes "persistent audiences available to advertisers for: targeting, utilizing user- profiles, opted-in survey data, and publisher-provided meta-data."[87]

The same kind of automation and optimization that has transformed interactive advertising on the Web, moreover, has come to the mobile platform as well. Teracent's Mobile SmartAds, for example, "enable advertisers to customize creative to individual users in real-time with dynamically optimized ads based on user demographic and interest-based data, as well as factors such as location, time of day—even the local weather! Your campaigns are constantly updated with the most relevant message to help you connect to in-market shoppers with the right offer at the right time. Best of all, your media performance, customer insights and learnings from the web can be applied to the mobile platform—creating one of the industry's first multi-platform media delivery systems!"[88]

---

[84] Apptera, "Voice Ads Perform Because They are Relevant, Targeted & Focused," http://www.apptera.com/assets/files/apptera_advertiser_data_sheet.pdf (viewed 26 Oct. 2009).

[85] Acxiom, "Mobile Marketing," http://www.acxiom.com/products_and_services/digital/mobile-marketing/Pages/MobileMarketing.aspx (viewed 30 Oct. 2009).

[86] 5th Finger, "About Us," http://www.5thfinger.com/AboutUs/Services/AnalyticsReporting/tabid/126/Default.aspx (viewed 30 Oct. 2009).

[87] Millennial Media, "Perform," http://www.millennialmedia.com/advertisers/solutions/perform/ (viewed 30 Oct. 2009).

[88] Teracent, "Mobile SmartAds," http://www.teracent.com/mobile.html (viewed 26 Oct. 2009).

D. Social Media Marketing

As social networks have become increasingly popular in recent years, social media monitoring, a form of online surveillance, has been become a common practice. "More than 75 percent of all Americans are participating in some form of social media through blogs, forums, and sites like Facebook and Twitter," notes to Visible Technologies, whose truCAST product suite includes social media monitoring and analysis applications. "As this chorus of conversations and the proliferation of social technologies that enable participation to grow, companies must make sense of this new channel for consumer interaction. Organizations need to think less about social media as just 'consumer chatter' and more about how to understand, digest, and invest in the science behind what consumers are saying—and most importantly, participate with where "their" consumers have congregated."[89]

Collective Intellect, a market intelligence company, offers marketers "a real time 'listening' interface that's available 24x7 with automated alert emails. Each topic allows the tracking of activity, sentiment, author demographics, and emerging conversational themes. Sources currently include digital blogs, boards, news, and micro-blogs."[90] Offering both basic analytics (which "automatically derives general statistics for each topic being analyzed, across activity [number of conversations], sentiment [positive, negative, neutral], conversational themes, and the source of conversations") and advanced analytics (which "automatically identifies key influencers by topic, analyzes specific mentions and interactions with brands, campaigns, media, and provides micro-blog context"), Collective Intellect "helps market researchers understand what consumers like and dislike, and how a brand/product/show/event is perceived by:

- Topic Attributes (tastes, features, etc.)
- Ritual Associations
- Emotional and Rational Associations
- Economic Associations
- Quality Associations
- Unlimited Consumer Associations: Selection, Trust, Authenticity, etc.[91]

Converseon offers a similar social media surveillance product, Conversation Miner, which "scours public, online discussion areas—including blogs, newsgroups, social media, and more—to capture, understand and report the issues, opinions and ideas that customers share between and among themselves…. Conversation Mining is an

---

[89] Visible Technologies, "ENGAGE Solutions," http://www.visibletechnologies.com/downloads/Solutions_ENGAGE.pdf (viewed 23 Oct. 2009).

[90] Collective Intellect, "Real Time Topic-based Monitoring," http://www.collectiveintellect.com/products/listen (viewed 22 Oct. 2009).

[91] Collective Intellect, "Our Analytics," http://www.collectiveintellect.com/about/our_analytics (viewed 22 Oct. 2009).

essential first step in developing an effective communications strategy to join and influence the conversation."[92]

Acxiom Relevance-X Social brings consumer data intelligence to online social marketing…. Acxiom Relevance-X Social helps you see the social networks of your customers and how many friends or contacts they may have within online communities, then compares this data against other markers…. With Acxiom Relevance-X Social data, marketers can:

- Establish and maintain up-to-date social intelligence on their customers
- Interact with socially active brand advocates
- Create campaigns that solicit user-generated content or demonstrate brand enthusiasm
- Develop loyalty programs to reward segments
- Test products or services
- Plan media where your customers are socially active
- Invite, communicate and influence the influencers in a respectful and engaging way to drive purchase behavior.[93]

For brands and marketers that want to start their own social networks, finally, the Ripple6 Platform integrates social media, content publishing, social marketing, and "the industry's only embedded word-of-mouth analytics tool."[94] Such analytics gives marketers "the ability to dig down into individual messages for insights, and it provides a thorough set of data points to represent how content flows through a community…. [revealing] [t]he actual paths that the message spreads across [and] [e]xactly who is getting the message and who is spreading it…."[95]

Motive Quest offers similar analytical services, promising to go "…beyond buzz and sentiment to understand the emotional and motivational drivers of consumers. We employ sophisticated harvesting methodology to browse the online world of blogs, groups, forums, social media and social networking sites to find the consumer conversation about your brand or category. We then employ our advanced software tools to understand the peaks of passion, the language of the consumer and the motivational drivers."[96]

---

[92] Converseon, "Conversation Mining: Are Your Ears Buzzing? http://www.converseon.com/conversation-mining.html (viewed 22 Oct. 2009).

[93] Acxiom, "The Power of Direct Social Media Marketing," http://www.acxiom.com/products_and_services/Targeted%20Advertising/social_media/Pages/Social_Influencer.aspx (viewed 30 Oct. 2009).

[94] Ripple6, "The Ripple Platform," http://www.ripple6.com/platform.aspx

[95] Ripple6, "Ripple Analytics," http://www.ripple6.com/platform/analytics.aspx (viewed 22 Oct. 2009).

[96] Motive Quest, "The Fathom Process: Online Anthropology," http://motivequest.com/main.taf?p=1,2 (viewed 22 Oct. 2009).

Nitro, similarly, "enables brands to cost-effectively measure and drive consumers' most valuable behaviors. Nitro plugs seamlessly into online communities and empowers you to listen to what your customers are telling you through their actions, and then respond to them in real-time. Use Nitro to:

- Incent and drive revenue-generating behaviors, while counter-incenting others. *If you're not doing this, you're leaving money on the table.*
- Message your users in real-time, in response to their behavior on your website. *Get the right message, to the right person, at the right time.*
- Cross-promote between your properties, encouraging users to *explore the breadth and depth* of what you have to offer.
- Identify your top users overall or for any particular behavior, and then drill down and see everything that an individual user has been doing on your site. *You're dealing with people, not page views.*
- Dynamically adjust your site to meet your users' needs. *The best predictor of future behavior is past behavior*, and you now know this intimately.
- Analyze behavioral trends on your site and use the data to constantly refine your product offering. *Your users are talking to you through their actions, you should be listening to what they're saying.*[97]

Another interactive ad company, 33Across,

> enables brand and performance marketers to unlock the power of the Social Web. Our SocialDNA™ platform uses previously untapped social data sources, in combination with advanced social network algorithms, to create unique and scalable audience segments. The SocialDNA™ platform:
> - Maps the social characteristics of your customers and prospects
> - Targets users who are most likely to respond to your campaign
> - Provides in-depth campaign analytics
> - Enables custom segment creation to improve optimization and targeting
> - Activates the most influential, viral, and engaged users around your brand
>
> Using 33Across, you'll drive improved results and have more actionable data at your fingertips.[98]

OpenAmplify's Amplify Web service, finally, uses "patented Natural Language Processing technology" to identify "the significant topics, emotions, intentions and

---

[97] Bunchball, "What Nitro Does," http://www.bunchball.com/products/nitro.shtml (viewed 24 Oct. 2009).

[98] 33Across, "Tap into the Social Dimension," http://www.33across.com/advertisers.php (viewed 26 Oct. 2009).

actions contained in text….

> Amplify believes that the only way to deliver truly relevant advertising is to understand the actual meaning of the content. Whether it's a web page, blog, forum post or any other text, Amplify can dynamically translate the meaning of the content into XML-based 'Signals' and send advanced targeting data directly to the ad server.

> Amplify does not merely identify the main categories, topics, brands, people and places being discussed. It can also understand the sentiment towards them, and even identify actions, intentions and pending decisions.

> Amplify uses its detailed understanding of actual page content to uniquely identify key purchase triggers and buying intent and can also further embellish user profiles in existing behavioral targeting systems—flagging real-time advertising opportunities to the ad server.[99]

Social networks, it is clear, have taken behavioral targeting to another level, allowing marketers to target users based both on their online activities as well as on self-disclosed profile information. Few social media users understand the wide range of data tracking and targeting that operates on and via these networks. Our communications on blogs, social networks and other Web 2.0 media are now being analyzed, including for the purpose of targeting what are called key or "Alpha" influencers (people whose opinion sways their network of relationships). As the authors of one recent book on the social media marketing industry explained, "The digitally networked visitor to these social media forms leaves behind footprints, shadows and trails of his or her individual collective endeavours in the form of data; data that enables new type of marketing and communication between and within consumer communications…. Over time, this process will lead to an understanding of the participant's digital footprint."[100] Products such as Nielsen's Buzzmetrics, BuzzLogic ("conversation ad targeting"), Ripple6 and Radian6 are part of this new digital data collection apparatus.[101]

---

[99] OpenAmplify, "Targeting," http://www.openamplify.com/files/Amplify_Targeting2.pdf (viewed 26 Oct. 2009).

[100] Ajut Jaokar, Brian Jacobs, Alan Moore, and Jouko Ahvenainen, *Social Media Marketing: How Data Analytics Helps to Monetize the User Base in Telecoms, Social Networks, Media and Advertising in a Converged Ecosystem* (London: Futuretext, 2009), pp. 2, 19.

[101] See, for example, Radian6, "Social Media Monitoring and Engagement for Agencies and the Enterprise," http://www.radian6.com/cms/solution; BuzzLogic, "Get Your Ads in Front of Passionate Consumers," http://www.buzzlogic.com/advertisers/conversation-targeting.html; Nielsen Online, "Millions of Consumer are Talking—Are You Listening," http://www.nielsen-online.com/products.jsp?section=pro_buzz; Ripple6, "Revolutionizing Research Through Online Conversations," http://www.ripple6.com/platform/socialInsights.aspx; and Suresh Vittal, "The Forrester Wave: Listening Platforms, Q1 2009," 23 Jan. 2009, http://www.nielsen-online.com/emc/0901_forrester/The%20Forrester%20Wave%20Listening%20Platforms%20Q1.pdf. The Interactive Advertising Bureau recently published "Social Advertising Best Practices,"

So-called third-party applications, including small pieces of software known as widgets, report information about their users, contributing to industry's data collection practices. For example, RockYou, which has created popular applications available on Facebook and other sites, recently launched its "Social Video Ads and Cross Platform Video Distribution" service. The data it collects with video, it says, "go far beyond impressions. Audience interactions (views, stops, rewinds, sharing) are gauged by the millisecond and response can be measured, in real numbers. Advertisers who can combine that data with behavioral or demographic profiling, to reach exact targets, get amazing results."[102] Another company, Clearspring (which makes many popular widgets), explains that it provides "detailed real-time analytics… to understand where visitors are viewing your widget, where it is spreading from and how people are interacting with it."[103] Kontagent is a "Facebook-funded Partner" that can deliver an "accurate understanding of the demographics of a site's users, how the users are socially linked, and what social interactions occur among the site's users."[104] It can "track" such data points as age, gender, location, number of friends, page views, and unique visits. Kontagent also tracks and measures what it calls the "virality" factor of a social networking application (such as a game), including "invite sent per user" and "invite and notification conversion rates" (meaning how a person responded to the invitation to download an application).[105]

Such targeting has become a standard practice within social networks. For example, Lotame's "behavioral targeting technology… analyzes behavior from consumers who chat-up brands on social media and community platforms…."[106] Its "Crowd Control" product "optimizes behavioral targeting by capturing previously unavailable data based on engagement, which is inherent to social media."[107] And as

http://www.iab.net/media/file/Social-Advertising-Best-Practices-0509.pdf, which discusses some of the data capture that occurs within social media, and ways of informing users of these practices. (All viewed 14 June. 2009).

[102] "RockYou Adds Video to its Ad Network," 3 Feb. 2009, http://blog.rockyouads.com/?cat=20 (viewed 15 June 2009).

[103] Clearspring, "Documentation: Reporting," http://www.clearspring.com/docs/reporting (viewed 15 June 2009).

[104] Kontagent, "Social Network Developers Demand New Class of Viral Analytic Tools," press release, 23 July 2008, http://www.kontagent.com/about/press/social-network-developers-demand-new-class-of-viral-analytic-tools/ (viewed 15 June 2009).

[105] Kontagent, "The Kontagent Fact Sheet," http://www.kontagent.com/about/ (viewed 15 June 2009).

[106] Laurie Sullivan, "Lotame's Three-Way BT Deal Measures Attitude, Buzz," *Online Media Daily*, 2 Feb. 2009, http://www.mediapost.com/publications/?fa=Articles.showArticle&art_aid=99440 (viewed 15 June 2009).

[107] "Lotame Receives Multi-Million Dollar Series a Financing in a Round Led by Battery Ventures," press release, 11 Feb. 2008, http://www.reuters.com/article/pressRelease/idUS107393+11-Feb-2008+PRN20080211 (viewed 15 June 2009).

MySpace explained in 2008 to advertisers, its "HyperTargeting" system allows it to meld registration data ("personal demographic information provided by MySpace users when they become members") with MySpace Profile Data ("freely expressed information by consumers about their passions and interests"). The result, claims MySpace, is "Next-Generation Targeting."[108] Nor are MySpace users aware that their data are sent off to a data warehouse each day to be analyzed for "deep insights," including "real-time analysis to drive [Fox Interactive Media's] advanced targeted advertising systems."[109] Such data mining is increasingly part of the structure of the online ad-targeting universe.

Facebook has had several well-publicized incidents involving its collection and use of data. After one recent flare-up, Facebook developed a set of "principles" and a "Statement of Rights and Responsibilities" that involved a discussion and a vote by its users.[110] But we believe that Facebook (and many other social networks and related sites), fail to adequately tell its users about how their data are collected and used. For example, Facebook tells brand advertisers that they can take advantage of a user's profile: "A profile is any individual's online representation of self. Through their profiles, people share details about their interests, activities and even contact information…. Reach the exact audience you want with Facebook targeting. The Facebook targeting spectrum ranges from broad reach demographic and geographic preferences like networks and colleges to more granular and specific profile interests." An examination of Facebook's media kit—or any similar description by competitors—will reveal a system based on a digitally driven "viral" marketing approach.[111]

E. Special Protections Needed for Youth

Given the alacrity with which young people have adopted social networks, it should come as no surprise that youth have become active participants—knowingly or not—in this marketing revolution. As Leslie, Levine, Loughlin, and Pechman point out, "Adolescents spend substantial time on the internet and they are especially interested in social networking sites and text messaging. According to Pew, 95% of 12-17 year olds use the internet, 66% use a mobile phone, and 64% use both.

[108] MySpace Media Kit, 2008, personal copy.

[109] Aster, "MySpace.com Scales Analytics for All of Their Friends," 2009, www.asterdata.com/resources/downloads/casestudies/myspace_aster.pdf; "Data Warehouse Appliance from Sun and Greenplum Powers Hypertargeting for Fox/MySpace," Greenplum, 24 Sept. 2008, http://www.greenplum.com/news/106/231/Data-Warehouse-Appliance-from-Sun-and-Greenplum-Powers-Hypertargeting-for-Fox-MySpace/d,blog/ (both viewed 14 June 2009).

[110] Facebook, "Facebook Principles," 15 April 2009, http://www.facebook.com/note.php?note_id=183540865300; Rochelle Garner, "Facebook Creates Site Principles After Users Complain," *Bloomberg.com*, 26 Feb. 2009, http://www.bloomberg.com/apps/news?pid=20601103&sid=azLmshQcmBJw&refer=us (both viewed 15 June 2009).

[111] Facebook, "Media Kit for Brand Advertisers," personal copy.

Further, 65% of adolescent internet users visit social networking sites such as MySpace and Facebook, and 57% visit video sharing sites. About 65% of youths aged 18 to 29 send text messages. Therefore, adolescents are extensively exposed to digital marketing, by which we mean advertisements, promotions, placements and research that employ the internet or other digital media."[112] And "...even when children recognize that they are the target of marketing influence," add Louis J. Moses, "they may nonetheless have difficulty defending against what may be quite powerful marketing tactics. Unlike much of traditional advertising, digital marketing environments tend to be interactive, immersive, alluring, engaging, and motivationally and emotionally rewarding. They also offer the opportunity for individuals to 'play' with products for extended periods of time."[113]

The advertising industry is using a broad range of digital marketing practices for reaching and engaging young people, including behavioral targeting, in-game advertising, mobile marketing, user-generated ads, viral videos, and immersive, "brand-saturated" environments.[114] While marketers have long studied children and teens, over the last several years they have expanded their research efforts. The major brands and advertising agencies have been concerned that unless they fully understand the interests and motivations of today's digital-savvy global youth, they risk losing their ability to influence them. Consequently, many of the leading online companies have conducted research efforts that analyze how young people use technology, communicate online, and view advertising. For example, Microsoft's Digital Advertising division joined forces with MTV in 2007 to produce "Circuits of Cool/Digital Playground," billed as "the largest study of its kind" to explore how young people (8-24 year olds) were interacting with technology around the world. Based on more than 300 hours of interviews and ethnographic studies with 240 10-20 year olds, the report analyzed how 13-17 year olds were "deepening" their "engagement" with the social dimensions of digital technology.[115]

---

[112] F. M. Leslie, L. J. Levine, S. E. Loughlin, and C. Pechman, "Adolescents' Psychological & Neurobiological Development: Implications for Digital Marketing," Memo prepared for the Second NPLAN/BMSG Meeting on Digital Media and Marketing to Children for the NPLAN Marketing to Children Learning Community, Berkeley, CA, June 29-30, 2009, p. 1.

[113] L. Moses, "Research on Child Development: Implications for How Children Understand and Cope with Digital Marketing," Memo prepared for the Second NPLAN/BMSG Meeting on Digital Media and Marketing to Children for the NPLAN Marketing to Children Learning Community, Berkeley, CA, June 29-30, 2009, p. 5.

[114] Jeff Chester and Kathryn C. Montgomery, "Interactive Food & Beverage Marketing: Targeting Children and Youth in the Digital Age," Berkeley Media Studies Group, May 2007, http://www.digitalads.org/documents/digiMarketingFull.pdf (viewed 13 Oct. 2008).

[115] Although three-quarters of the respondents said there was "too much advertising" today, nearly the same number agreed that they "like ads which tell me about new products of interest to me." "New Global Study From MTV, Nickelodeon and Microsoft Challenges Assumptions About Relationship Between Kids, Youth & Digital Technology," 24 July 2007, http://sev.prnewswire.com/multimedia-online-internet/20070724/NYTU10924072007-1.html. See also research presented to the Advertising Research Foundation's Youth Council, http://www.thearf.org/assets/youth-council (both viewed 10 Oct. 2008).

The popular social networking site Habbo, similarly, took advantage of its "virtual world and social networking environment" to investigate its 12-18 year old users, including their "personality and attitudes." The resulting 255-page "Global Habbo Youth Survey 2008" analyzed its users' preferences for fast food, beverages, mobile services, and other products. Breaking down its young audience into five "global youth segments" (traditionals, rebels, loners, creatives, and achievers), Habbo reported that such brands as Taco Bell, Coca-Cola, Wendy's, McDonald's, and Subway were among the most popular products within the different groups.[116] Habbo updated the study in 2009.[117] "For the youth, brands play an important part of helping to build their identity and self image among their friends," observed Emmi Kuusikko, director of user and market insight for Habbo's parent company, Sulake "Targeting this young audience is often key to brands' success, as teenagers are beginning to take responsibility of their own consumption habits. Although teens are often seen as fickle, the brands that they align themselves with stand to gain as they grow up."[118]

Such research focusing on digital youth is designed to create a "marketing map," so brands can both target youth today and better prepare for emerging new trends. Studies are regularly being produced that finely detail how many minutes young people "multi-task" and spend on social networks, play videogames, view online programming, chat with friends, listen to music, and text via their mobile devices. Among some of the other leading digital advertising firms involved with youth research are Nielsen, Yahoo, and Nickelodeon.[119] Analyzing the youth market is only a part of a more elaborate global online advertising research apparatus. Microsoft, for example, has created "adCenter Labs"—with one based in Beijing—to "incubate" new digital marketing technologies.[120] Yahoo's Bangalore-based lab working on online advertising is exploring "Machine Learning techniques to learn the associations between pages, advertisements and users."[121] Leading ad agencies have

---

[116] "Habbo's Second Global Youth Survey Reveals the Digital Profiles of Teens Online," press release, 3 Apr. 2008, http://www.sulake.com/press/releases/2008-04-03-Global_Habbo_Youth_Survey.html (viewed 9 Oct. 2008).

[117] "Habbo Global Youth Survey 2009 Reveals the Brands at the Forefront of Teens' Minds," 3 June 2009, http://www.sulake.com/press/releases/2009-06-02-Habbo_Global_Youth_Survey_2009.html (viewed 30 Oct. 2009).

[118] Quoted in "Habbo Global Youth Survey 2009 Reveals the Brands at the Forefront of Teens' Minds."

[119] See, for example, Nielsen Company, "Special Report: What do Teens Want?" Nielsen Wire, 26 June 2009, http://blog.nielsen.com/nielsenwire/online_mobile/special-report-what-do-teens-want/; "Navigating the Teen Media Experience," Online testing Service, 2008, http://www.scribemedia.org/2008/09/10/teen-media-habits/; and Yahoo, "Truly, Madly, Deeply Engaged: Global Youth, Media and Technology," n.d., http://www.iabaustralia.com.au/Truly_Madly_Final_booklet.pdf (all viewed 14 Oct. 2008).

[120] adCenter Labs—Innovations in Digital Advertising," Microsoft adCenter Labs, http://adlab.msn.com/ (viewed 14 Oct. 2009).

[121] Yahoo! Labs, Bangalore, http://bangalore.yahoo.com/labs/projects.html (viewed 14 Oct. 2009)

also established their own research and development facilities, such as Interpublic's "Emerging Media Lab," which works to "evaluate new media trends and consumer behavior patterns."[122]

Should anyone doubt that youth are squarely in the crosshairs of the interactive advertising arsenal, the examples below should eliminate any questions.

A popular online teen site, **eCRUSH**, is committed to giving advertisers direct access to the often-elusive teen demographic. "Teens love eCRUSH," the site proclaims, with over 3 million registered users, 1 million monthly unique visitors, and 25 million monthly page views. "Advertisers love eCRUSH," too, for they "get to engage with teens at the most immersive levels. We bring you closer to teens, in more custom ways, than any other site you'll work with….

> **eCRUSH Highlights for Advertisers:**
>> **Age- and gender-targeted ads**
>> **No wasted impressions!** Since almost all users are logged in when they're on the site, we can target your ads down to age and gender.
>>
>> **Unique & proprietary "Lock and Key" immersive advertising program** Looking for something more than traditional online ad impressions? **eSPIN has the ability to deliver a wide-range of desired *actions*** such as securing mailing list sign-ups, contest entries and survey results; guaranteeing viewings of your trailers and videos; or generating downloads of your interactive games, screensavers, etc.—whatever your needs may be. Each day eCRUSH can supply thousands of targeted teen users in this totally measurable manner.
>>
>> **Building profiles**
>> What better way to reach teens than to give them a chance to **organically integrate your brand into their eSPIN Profile,** and then recommend it to their peers? Selling jeans? Let teen girls define their style as a "flare", "bootleg" or "ultra low rise". Selling digital music or ringtones? Have us add a branded "Theme Song" to their profile that other users can sample. The possibilities are endless.
>>
>> **Custom quizzes**
>> We'll integrate your **brand into our bi-weekly editorial quiz** to over 1MM teens. Having your brand integrated into the editorial voice is one way to gain the attention of this A.D.D. generation. Clients like JanSport and Random House keep coming back for more.[123]

---

[122] IPG, "Lab Services," http://www.ipglab.com/tabid/80/Default.aspx (viewed 14 Oct. 2008).

[123] eCRUSH, "Advertising Information," http://www.ecrush.com/advertising_info.pdf (viewed 24 Oct. 2009).

TeenCrunch makes similar claims for its advertising services, which "offers a massive online display advertising opportunity…." But "to simply buy a network of display impressions from a large teen community or network," the company admits, "would not actually penetrate core teen usage patterns or foster brand engagement. In comes TeenCrunch… a mash-up of teen activity online:

- branded icons/avatars/wallpapers in social profiles, instant message platforms, mobile phones and emails
- branded clothes and accessories for their online dolls/avatars for their doll communities, social profiles and emails
- branded content in teen celebrity sites and blogs
- branded audio mash-ups for their profile pages and ringtones
- branded, moderated contests with user generated content submissions circulating virally on multiple online platforms.[124]

Among traditional media enterprises that have turned to the Internet to reach the youth demographic, the **Hearst Teen Internet Group** stands out. With such magazines as *Seventeen*, *CosmoGIRL*, and *Teen* already popular among girls both online and off, Hearst has rolled out a full slate of commercially branded digital ventures, from sweepstakes and quizzes to flipbooks and "advergames."[125]

The popular social network **Meez** has taken a similarly branded approach, promising "Measurable Engagement with Young Consumers:

Meez Brand Immersion Packages are designed to give brands a much deeper connection with young consumers than traditional online advertising. With our branded 3D Avatar and Virtual World packages, users actively choose to associate with your brand, so the brand relationship is authentic and meaningful.
- In the June 2009 Media Metrix report, Meez was ranked as the #1 U.S. Internet site measured by engagement, or how long an average visit lasts—in this case 36.4 minutes.
- Meez was ranked #4 in total engagement, measuring total minutes per visitor per month. Meez engagement has grown from 100 minutes a month per visitor in July 2008, to 184 minutes in January 2009, and now to 227 minutes in June 2009….

Immersion Package Benefits
1. **Deep brand engagement**
   At Meez, your brand is not limited to basic ad media placements.

---

[124] TeenCrunch, "About Us," http://www.teencrunch.com/aboutus.html (viewed 29 Oct. 2009).

[125] Hearst Teen Internet Group, "Case Studies," http://www.htigmediakit.com/r5/cob_page.asp?category_code=case (viewed 29 Oct. 2009).

Custom branded 3D avatar items and virtual roomz are part of the user experience.

   2. Social network presence
   Meez distributes its service to top social networking sites, including Facebook and MySpace—giving your brand access to these communities and their large user bases.

   3. Viral exposure
   Meez avatars can be posted anywhere that accepts a digital image - social media sites, blogs, instant messengers, etc.—so your brand is virally distributed by users to the sites and services they use.

   4. Measurability
   Meez delivers metrics that quantify user interactions with your brand, tracking all activity related to your branded virtual items.[126]

Apptera has found still another way to reach teens, via mobile ads directed at those seeking information on movie theater locations, show times, and ticket purchases. Over 50 million consumers make such calls every year (on behalf of an audience that totals nearly 125 million), and that audience includes "high usage" across the teen (12-17) demographic. Apptera's "interactive audio technologies," moreover, "…can initiate additional touchpoints through SMS messages."[127]

Betawave, purveyor of "attention based media, … helps brands capitalize on activities that have already attracted the audience's time and attention, then transforms that attention into brand engagement by speaking to the audience in a familiar and valued format….[128]

> If it feels like it's impossible to capture the attention of today's short-attention-span teenager, we'd beg to differ. On average, teenagers spent 15 mins per session on our publisher sites and 73.7 mins per month. More importantly, their mindstate is highly receptive to advertising with stats 118% higher than industry average and 158% more likely to agree that advertisements influence their purchase decisions.
>
> What's our secret? Our selection of casual games, virtual worlds, and social play sites that are in touch with their Teen and Tween audiences. We know how to create content to hold the attention of the American Teenager, but to also keep them coming back for more. Simply put, our sites are much more entertaining than high school economics. Anyone disagree?... Anyone?... Anyone?

---

[126] Meez, "Advertise with Us," http://www.meez.com/help.dm?sect=8 (viewed 29 Oct. 2009).

[127] Apptera, "Present Your Brand to Millions of Active Movie-goers," http://www.apptera.com/assets/files/moviechannel_1sheet_209_adsales_e.pdf (viewed 26 Oct. 2009).

[128] Betawave, "Ad Solutions," http://betawave.com/audiences/teens.html (viewed 12 Oct. 2009).

The Teen's Teen

Our Teen and Tween audience consumes all types of different media, but is addicted to the Internet. The content of our sites appeal to the "Influencers" — the kids who assert their preferences with parents and peers and impact the behavior of others, especially when it comes to fashion and the latest trends.[129]

Alloy Media + Marketing, "one of the country's largest providers of targeted media programs," offers a multifaceted Youth Network with separate campaigns for teens, college students, and "young independents."[130]

Ignoring the teen market? LOL. Today's teenager is a force in consumer spending, part of a highly influential $175B consumer market.

One in three high school seniors carry a credit card. As a group they earn 63% of their income independently from parents and spend it on brands they know and trust.

But teens are exceptionally hard to target, requiring unconventional tools and expertise. Consider that today's teens are:
- Bombarded by choices,
- Demanding of speed and response,
- Savvy in the face of marketing messages,
- "Wired" throughout the day via multiple forms of interpersonal communication like e-mail, IM, cell phones and text messaging.

What's a teen-focused brand to do? Enter Alloy Media's Youth Network. Our comprehensive services and unparalleled experience continue to make us the obvious teen marketing partner for outstanding companies, large and small. With the industry's widest array of tools and deepest breadth of teen-centric insight, the Youth Network targets teens in their places, on their terms, 24/7.[131]

Kiwibox, "the first social networking destination and online magazine where teens produce, discover, and share content," signed a deal last year with Burst Media to launch the Kiwibox Teen Network,

---

[129] Betawave, "Teens 12-17—Audiences," http://betawave.com/audiences/teens.html (viewed 12 Oct. 2009).

[130] Alloy Media + Marketing, "About Us," http://www.alloymarketing.com/aboutus.html (viewed 12 Oct. 2009).

[131] Alloy Media + Marketing, "The Youth Network: Teens," http://www.alloymarketing.com/media/teens/index.html (viewed 12 Oct. 2009).

a premier online advertising network for marketers looking to reach teens. The network is comprised of a select group of teen focused web sites—and is anchored by Kiwibox. Publishers within the Kiwibox Teen Network have the opportunity to share ideas, content, tools, partnerships and marketing opportunities across both the web and mobile…. The Kiwibox Teen Network gives brand advertisers an easy solution for reaching the valuable yet elusive teen audience in a single online media buy that provides comprehensive campaign management and consolidated reporting, while integrating a variety of interactive and engaging campaign elements. The partnership further cements Kiwibox's position as a premier provider of teen content, and places the Kiwibox brand in front of more advertisers looking to reach this audience.[132]

Tribal Fusion's Teen Channel, which includes such sites as Student.com, myYearbook.com, and eBuddy.com, tells prospective advertisers that visitors to its sites are

- 2 times more likely than the average Internet user to have spent $100 to $199 on female teen clothing/shoes in last 6 months.
- 1.5 times more likely than the average Internet user to have spent $200 to $499 on male teen clothing/shoes in last 6 months.
- 1.7 times more likely than the average Internet user to have spent $100 to $199 online on consumer electronics in last 6 months.
- 1.7 times more likely than the average Internet user to be a student.[133]

AOL's Platform A advertising unit helps its clients target teens, for whom "the web is a playground. It's a place to socialize, play games, and check out the latest music, videos and blog postings. And you should join them online, because teens hold some heavy purse strings—spending $200 million of their own money and directly influencing $300 billion in spending annually."[134] AOL's **MediaGlow** brand, meanwhile, "reaches 50% of teens online—that's 2.1 million teens per day across a wide range of premium sites focused on teen interests. And with AOL Mail, AIM, and diverse blogs and social sites, you can bet they'll spread the word about stuff they like."[135]

"**Piczo** is a social network that empowers teens worldwide to creatively express themselves, build personal communities, and share experiences with their friends in

---

[132] "Kiwibox Partners with Burst Media to Create Kiwibox Teen Network," 28 Oct. 2008, http://www.burstmedia.com/about/press_releases/press_10_28_2008.asp (viewed 12 Oct. 2009).

[133] Tribal Fusion, "Teen Channel: The Best Way to Reach Active Online Teens," http://tribalfusion.com/channels/teen/print.html (viewed 12 Oct. 2009).

[134] AOL Platform A, "Zack Age 18," http://advertising.aol.com/sites/default/files/webfm/consumer-profiles/ZackOneSheet.pdf (viewed 12 Oct. 2009).

[135] AOL Platform A, "Zack Age 18."

a safe environment. Piczo's customizable content, colorful graphics, glitter text, video, and photo tools spotlight member creativity without requiring technical skills. By integrating Nitro into their site, Piczo was able to quickly launch Avatars, Awardz and Pointz to power a fully integrated virtual economy to accomplish three things:

- Increase customer engagement, in turn increasing page views, ad impressions and ad revenue.
- Reduce customer defections. Teens are notoriously fickle and have many options available to them online. Piczo is using Nitro to increase customer engagement, loyalty and lock-in.
- Drive additional revenue through sponsored virtual goods. Given their audience demographic and focus on personalization and customization, Piczo is an ideal environment for brand advertisers to reach teens in a way that's integrated with the site experience.[136]

These are but a handful of the dozens of advertising companies that include teens among their prime demographic targets, unleashing all manner of marketing techniques—including many that infringe upon basic privacy rights—in their quest to build lifelong brand loyalty.

F. The Growth of Online Transactions in Health and Finance

Consumers increasingly rely on the Internet and other online media for health and financial advice and services. While we recognize that the Web is an important source for such information, consumers seeking information in such personal and potentially sensitive areas must be assured of the highest level of privacy protection. Unfortunately, this has not been the case.

Pharmaceutical companies, for example, are now using digital marketing services, including what's called "unbranded" social networks, to attract new customers.[137] There are also a growing number of health-related websites offering interactive advertising opportunities for marketers, including "condition-targeted" placement (facilitated by "widgets and viral elements").[138] Online ad giants, such as Time

---

[136] Bunchball, "Success Stories: Piczo," http://www.bunchball.com/customers/piczo.shtml (viewed 24 Oct. 2009).

[137] For example, Digitas Health works with AstraZeneca, Pfizer, Lilly, Merck and others. Digitas Health, "Clients," http://www.digitashealth.com/#/work/clients/. Ogilvy Healthworld provides a range of direct-to-consumer marketing services, including online. Ogilvy Healthworld, "Direct to Consumer, Direct to Client," http://www.ogilvyhealthworld.com/2-5_healthworld_services_dtc.html (both viewed 15 June 2009).

[138] See, for example, Waterfront Media, "Advertise with Us," http://www.waterfrontmedia.com/advertise-with-wfm.aspx; Healthline, "2009 Media Kit," www.healthline.com/corporate/media/healthline_media_kit_2009.pdf (both viewed 15 June 2009).

Warner's Platform A, have made presentations on "Behavioral Targeting for Pharmaceutical Marketers."[139]

We applaud the Food and Drug Administration's upcoming inquiry into the role of social and digital marketing in the promotion of health products.[140] The FTC should work closely with the FDA on this, since the pharmaceutical and health industries are engaged in the very practices that are at the heart of the commission's work on digital marketing and privacy, and the FDA appears poised to take action in this important area.[141]

Perhaps the most cautionary tale concerning the need to protect consumer privacy online arises when examining the role of online advertising and the financial market. By 2011, 101 million adults will be banking online—many even using their mobile devices to engage in personal financial transactions.[142] As evidence of the plight Americans feel today about their financial losses, it is perhaps telling to examine how the crisis has affected what they are searching for online. According to online market research company comScore, last December there were "searches using the term 'unemployment' (up 206 percent to 8.2 million searches) and 'unemployment benefits' (up 247 percent to 748,000 searches)... terms relating to personal asset situations, including 'mortgage' (up 72 percent to 7.8 million searches), 'bankruptcy' (up 156 percent to 2.6 million searches), and 'foreclosure' (up 67 percent to 1.4 million searches)."[143]

During the height of the housing boom, the top-25 mortgage companies in advertising spending dolled out enormous sums on online advertising, especially display advertising. Four mortgage or financial companies were in the top five of online advertising spending in August 2007, according to Nielsen: Low Rate Source (#1), Experian Group (#3), InterActive Corp (#4) [which then included Lending

---

[139] Platform A/AOL, "Behavioral Targeting for Pharmaceutical Marketers," 2006, personal copy.

[140] U.S. Food and Drug Administration, "Public Hearing on Promotion of FDA-Regulated Medical Products Using the Internet and Social Media Tools," 12-13 Nov. 2009, http://www.fda.gov/AboutFDA/CentersOffices/CDER/ucm184250.htm (viewed 30 Oct. 2009).

[141] John Mack, "Expect FDA Social Media Draft Guidance before End of 2010," Pharma Marketing Blog, 28 Oct. 2009, http://pharmamkting.blogspot.com/2009/10/expect-fda-social-media-draft-guidance.html (viewed 30 Oct. 2009).

[142] Lisa E. Phillips, "Banking and Bill Paying Online: Chasing Those Digital Dollars," May 2007, http://www.emarketer.com/Report.aspx?code=emarketer_2000412. For mobile applications, see "Banking and Payments," *Mobile Marketer*, http://www.mobilemarketer.com/cms/news/banking-payments.html (both viewed 14 June 2009).

[143] "Americans' Online Search Behavior Points to Significant Increase in Personal Financial Turmoil," press release, 24 Feb. 2009, http://www.comscore.com/Press_Events/Press_Releases/2009/2/Economic_Search_Terms (viewed 14 June 2009).

Tree.com] and Countrywide Financial Corporation (#5).[144] Consumers were faced with increasing expenditures by mortgage and loan companies for online marketing. For example, from 2005 to 2007, online mortgage services companies Countrywide Financial and LowRateSource increased their online advertising spending from $18.3 million to $35.5 million and $17.9 million to $51.7 million, respectively.[145] Meanwhile, mortgage companies, anxious to have a prominent place in search engine advertising, bid up search terms like "refinancing mortgage" and "mortgage refinance."[146]

The role of online lead generation (so-called "trigger leads") and the use of behavioral targeting for mortgages and other loans represent a potentially critical threat to the privacy of digital consumers, whose data are used without their clear understanding, let alone control, of such surveillance. For example, Lightspeed Research promises marketers a "full wallet view across customers' many financial services relationships," providing "unparalleled insight into consumers' use of credit, debit, banking and alternative payment products. We passively gather information from their financial accounts and merge it with third-party behavioral datasets, survey-based attitudinal insights, and industry expertise."[147] Such commingling of online and off-line data, providing veritable strip searches of consumers' economic status and marketplace behavior, has become common, thanks to companies such as Targusinfo. Its AdAdvisor, for example, claims to be "unique in its ability to provide insight into:

- What a consumer is likely to purchase, across a wide range of products and services
- A consumer's likely ability to afford a purchase
- Household- and individual-level demographics, including age and gender
- What websites a consumer is likely to visit.

---

[144] "Nielsen/Netratings Reports Topline U.S. Data for August 2007," www.nielsen-online.com/pr/pr_070910.pdf; Peter Kafka, "What Mortgage Crisis? Financial Ads Keep Pouring Online," *Silicon Alley Insider*, 10 Sept. 2007, http://www.businessinsider.com/2007/9/what-mortgage-c (both viewed 14 June 2009).

[145] Nielsen/NetRatings Report, Top 10 Advertisers by Estimated Spending, December 2006; April 2007; and August 2007.

[146] Financial services companies were reported to have "doubled their spending on Internet advertising during the past four years," with predictions of further significant increases. "Online Spending to Balloon at Financial Co.s," *Mortgage Advertising Insider*, 5 June 2007, http://www.mortgagedaily.com/NewsAlertArchives/AdNewsletter060507.html. Bernstein Research estimated that 30 percent of online ad spending for 2008 would derive from finance, real estate, and insurance. Laurie Sullivan, "Bernstein: Online Ad Revenue To Grow," *Online Media Daily*, 11 Aug. 2008, http://www.mediapost.com/publications/?fa=Articles.showArticle&art_aid=88244 (both viewed 14 June 2009).

[147] Lightspeed Research, Financial Services Brochure, http://www2.lightspeedresearch.com/uploads/Financial_Services_Brochure.pdf (viewed 22 May 2009).

"With the largest repository of US offline consumer information," the company declares, "Targusinfo is uniquely positioned to take online targeting to the next level…. Its data repository is updated ten times daily and incorporates millions of data points across more than 100 dynamically changing data sources."[148] "…Targusinfo has built a foundation of data from the nation's telecommunications providers," the company admits, "making our information exceptionally precise, relevant and actionable. Drawing from a proprietary network of more than 90 data sources, Targusinfo uses patented processes to link together the most complete and accurate name, address and phone data possible."[149] So-called "trigger leads," part of the online industry's "lead generation" business, are also a part of the online ad environment, giving marketers the ability to target consumers based on the financial activity at "near real time speed and precision."[150]

As with everything else in the interactive advertising world, lead-generation technology is becoming more sophisticated—and more covert. "With Pontiflex AdUnit X banners," for example, "visitors can submit information to advertisers without having to click-through to a landing page…. User data gets transmitted to advertiser on the back-end automatically."[151] Pontiflex also has designs on the burgeoning social media marketing segment, promising to make "social networking profitable" by allowing publishers to "…leverage their user information effectively to maximize advertising revenue. Advertisers get more leads. Publishers get more revenue. Users can enjoy a more seamless and relevant experience."[152]

Adobe's Omniture, an online marketing and Web analytics company that has worked with some of the largest subprime lenders in the mortgage industry,

---

[148] Targusinfo, "Taking Online Targeting to the Next Level," Mar. 2009, http://marketing.targusinfo.com/AdAdvisorLearningCenter.html (viewed 22 May 2009).

[149] Kim Garner, "How to Master Customer Acquisition: On-Demand Lead Scoring," Apr. 2008, http://www.targusinfo.com/documents/LeadScoring.pdf (viewed 22 May 2009).

[150] See, for example, Equifax Marketing Services, "TargetPoint Acquisition," www.equifaxmarketingservices.com/pdfs/TargetPoint-Acquisition-F06.pdf; Equifax Marketing Services, "High-Tech Industry," http://www.equifaxmarketingservices.com/high-tech-industry.htm. One online marketer explained why online lead generation (OLG) is preferable to an offline approach: "With OLG, marketers are guaranteed to be getting new, fresh data and they don't have to worry about its relevance—it is guaranteed to be up to date. As the data is brand-new and unique to them, it won't have been sitting in a database for years while the person could have moved their house, changed telephone numbers or even changed their name. And due to the rigorous data-cleansing processes of Online Lead Generation, every lead is guaranteed to be fully contactable— there are no 'dead leads,' and all the contact details are fully checked." Christopher Petix, "Economy Calls For Online Lead Generation," *Online Media Daily*, 10 Feb. 2009, http://www.mediapost.com/publications/?fa=Articles.showArticle&art_aid=99943 (all viewed 14 June 2009).

[151] Pontiflex, "Convert CPM Banners into CPL Revenue," http://www.pontiflex.com/download/adunitx.pdf (viewed 23 Oct. 2009).

[152] Pontiflex, "Now, Both Publishers and Advertisers have a Friend," http://www.pontiflex.com/download/socialnetworking.pdf (viewed 23 Oct. 2009).

including Countrywide Financial, is a leader in behavioral targeting. Through its "foundational product," SiteCatalyst, the company provides "actionable, real-time intelligence" about the online behavior of users visiting their websites.[153] Omniture's use of behavioral targeting illustrates how this powerful approach is different from more traditional direct marketing. As the company explains,

> On-site Behavioral Targeting leverages highly automated technology that takes advantage of the same Web analytics data you are most likely already collecting, such as referring site, referring search engine and keyword phrase, time and day of visit, machine properties such as IP address and browser settings, along with complete individual visitor click-stream data. The system efficiently organizes the anonymous data to build individual visitor profiles containing the hundreds of data variables that occur during a visitor's visit to a Web site, each with some small amount of predictive value. Highly sophisticated mathematical models then interpret these variables in real-time and assemble together their collective predictive value to determine exactly which piece of content or promotion is most likely to engage each visitor, and then serves that content while the visitor is still on the site, keeping track of the entire context of each piece of served content. The On-site Behavioral Targeting system then measures if the visitor responded to the served content in the manner predicted. By efficiently learning in real time from any differences between the predicted response behavior and actual response behavior, the system continuously makes itself smarter for the next decision….

> On-site Behavioral Targeting leverages each individual Web visitor's observed click-stream behavior, both on the current Web visit and from all previous visits, to decide what content is likely to be most effective to serve to that visitor, in order to achieve a desired and measurable commercial objective; such as increasing revenue, conversion, or click-through. It then measures its effectiveness and reports back the lift and yield that it delivers. On-site Behavioral Targeting is marketing nirvana in many ways, as it closes the loop in real-time while the visitor is still on your Web site.[154]

Bankrate.com actively engages in behavioral targeting, explaining that "a consumer comes to Bankrate.com and reads three home equity articles, calculates the benefits of a home equity loan vs. a HELOC and looks at rates for a $50k home equity loan. This consumer has shown tremendous interest and intent in securing a home equity product. As an advertiser, you now have the ability to continue communicating with

---

[153] Omniture, "Omniture SiteCatalyst 14: Real-Time, High-Performance Analytics & Reporting," http://www.omniture.com/offer/170 (registration required).

[154] Omniture, "The Rise of Onsite Behavioral Targeting," http://www.omniture.com/en/products/conversion (registration required).

this consumer across hundreds of web sites."[155] Bankrate.com's website places tracking cookies in online users' browsers, which then tracks pages later visited by them. Bankrate.com consumers who view "a mortgage story, rate table, or calculator within the last 120 days will be tagged and placed in the Mortgage Behavioral Targeting Bucket/Segment." When such a consumer visits a site within the Bankrate.com's behavioral targeting network, they will receive mortgage advertising. Bankrate.com offers behavioral targeting-enabled services for Mortgages, Home Equity, Credit Cards, and Deposits (CDs/Investment/Checking/Savings). On its Web page explaining "Why Behavioral Targeting," Bankrate.com notes that "Now you can expand upon this finite target and follow these users with your message once they've left the Bankrate site, but while they are still very much in-market...."[156]

Online financial marketers are also using the latest developments from neuroscience (discussed below). Neurofocus, a Nielsen-backed company that helps create digital and other ads based on brainwave research, released a study earlier this year that probed deeply into test subjects' subconscious minds to discover their hidden, unspoken beliefs and feelings about financial institution brands. They "tested consumers in its laboratory to determine exactly what financial brand messages they responded to best, at the deep subconscious level of their minds, where brand perceptions, brand loyalty, and purchase intent are truly formed."[157] Banks and other financial services companies are turning to neuromarketing and other advanced techniques to help address the loss of consumer confidence from what is being called "the first recession of the digital age."

G. The Use of Neuroscience in Online Marketing

A number of marketers are now drawing freely on the latest developments in neuroscience to drive their advertising campaigns, zeroing in on our most intimate needs and vulnerabilities. The Nielsen Company, for example, already well established in the field of traditional audience measurement in more than 100 countries, has extended its reach into the Internet through its "online intelligence" properties—NetRatings and BuzzMetrics.[158] More recently, the company made a "strategic investment" in NeuroFocus, a firm that specializes in the application of brainwave research to advertising, programming, and messaging:

---

155 "Behavioral Targeting FAQs," Bankrate.com, http://www.bankrate.com/mediakit/ad-behavioral-faq.asp (viewed 14 June 2009).

156 "Behavioral Targeting," Bankrate.com, http://www.bankrate.com/mediakit/ad-behavioral.asp; "Behavioral Targeting: How Does it Work?" Bankrate.com, http://www.bankrate.com/mediakit/ad-behavioral-how.asp (both viewed 14 June 2009).

157 "Billions for Bank Bailouts, But How to Rebuild the Brands? NeuroFocus Reveals New Brainwave-Based Solutions," 23 Feb. 2009, http://www.reuters.com/article/pressRelease/idUS110810+23-Feb-2009+PRN20090223 (viewed 30 Oct. 2009).

158 Nielsen//NetRatings, http://www.netratings.com/; Nielsen BuzzMetrics, http://www.nielsenbuzzmetrics.com/ (both viewed 25 Sept. 2008).

NeuroFocus uses established electroencephalography (EEG) technology to directly measure the brain's reaction to a variety of stimuli. Consumers wear a specially designed baseball cap embedded with sensors that passively track brain responses about 2000 times a second as they interact with advertising or marketing materials. NeuroFocus can precisely and instantaneously determine what parts of the messages they pay attention to; how they emotionally engage with them; and what is actually moved to memory. In addition, NeuroFocus blends eye tracking, galvanic skin response and other physiological parameters to provide a comprehensive solution that augments the brain wave analysis.[159]

Other companies have turned to such techniques, including functional magnetic resonance imaging (fMRI), in an effort to assess the effectiveness of various advertising campaigns. Marketers are particularly interested in research that addresses how "specific patterns of brain activation predict purchasing," the potential "shopping centers in the brain," and the neurological basis of purchasing.[160]

Neurological factors, moreover, appear to play a role in the susceptibility of older youth to advertising. As Agnes Nairn observes, "It has commonly been assumed that older children are less vulnerable to advertising because their cognitive capacities have developed sufficiently to equip them with 'coping skills.' However, a growing body of evidence from both the brain sciences and marketing suggests that vulnerability may actually increase during teenage years."[161] Leslie et al. concur: "What does the research on adolescent psychological and neurobiological development suggest about adolescents' response to digital marketing? It indicates that adolescents are more prone to making poor decisions when emotionally aroused. Since digital marketing purposefully evokes high emotional arousal and

---

[159] "Nielsen Makes Strategic Investment in NeuroFocus, An Innovative Leader in Neuromarketing Research," press release, 7 Feb. 2008, http://www.nielsen.com/media/2008/pr_080207.html (viewed 24 Sept. 2008). David Penn, managing director of UK-based Conquest Research, one of the largest agencies specializing in brand and communications research, offers a more measured assessment of the potential of "neuromarketing": "In fact, most of the exponents of neurological/biological measures are now quick to admit that their techniques are not alternatives, but complements to conventional research—either quantitative or qualitative." David Penn, "Beyond Neuroscience—Whatever Happened to Neuromarketing?" *Admap*, Jan. 2008, www.warc.com/LandingPages/Generic/Results.asp?Ref=898 (purchase required).

[160] Brian Knutson, Scott Rick, G. Eliot Wimmer, Drazen Prelec, and George Loewenstein, "Neural Predictors of Purchases," *Neuron* 53: 147-156; Alain Dagher, "Shopping Centers in the Brain," *Neuron* 53: 7-8.

[161] Nairn, A. (2009). Changing the Rules of the Game: Implicit Persuasion and Interactive Children's Marketing. Memo prepared for the Second NPLAN/BMSG Meeting on Digital Media and Marketing to Children for the NPLAN Marketing to Children Learning Community, Berkeley, CA, June 29-30, 2009, p. 1.

urges adolescents to make consumption decisions under high arousal, it exacerbates this problem."[162]

In its investigation of this important area of marketing, the FTC would do well to examine the work of B.J. Fogg, who directs Stanford University's Persuasive Technology Lab. Fogg believes that social media platforms such as Facebook are mediums that can promote "mass interpersonal persuasion" (MIP).[163] Fogg notes that MIP "focuses on *changing* people's thoughts and behaviors…." He describes six "components" of mass interpersonal persuasion that have been integrated in the Facebook platform. While Fogg isn't examining marketing per se, his six characteristics have critical implications for understanding the contemporary marketing landscape:

1. Persuasive Experience: An experience that is created to change attitudes, behaviors, or both.
2. Automated Structure: Digital technology structures the persuasive experience.
3. Social Distribution: The persuasive experience is shared from one friend to another.
4. Rapid Cycle: The persuasive experience can be distributed quickly from one person to another.
5. Huge Social Graph: The persuasive experience can potentially reach millions of people connected through social ties or structured interactions.
6. Measured Impact: The effect of the persuasive experience is observable by users and creators.[164]

Social media marketing, which has rapidly developed over the last several years, reflects the structure proposed by Fogg. Conversations about brands, products, and services are increasingly woven into the interactions on social networks as a means of connecting with others, and these conversations can have great influence—even when people aren't consciously asking about brand opinions.

BT's ability to lock in individual users is also being fueled by connections to offline databases, as well as other profiling technologies. For example, Acxiom, the marketing database giant, now offers a range of targeting tools for online marketing, including on websites, mobile phones and email.[165] Its "Relevance-X"™ product,

---

[162] Leslie, et al., "Adolescents' Psychological & Neurobiological Development: Implications for Digital Marketing."

[163] B. J. Fogg, "Mass Interpersonal Persuasion: An Early View of a New Phenomenon," n.d., https://www.iterasi.net/public/archive/LIZkSfUu_0uGn-M6q3313A (viewed 13 Sept. 2009).

[164] Fogg, "Mass Interpersonal Persuasion: An Early View of a New Phenomenon."

[165] Explaining its acquisition of behavioral re-targeting company EchoTarget, an Acxiom executive noted that the "acquisition goes beyond the current behavioral targeting paradigm to give clicks context, leveraging the most comprehensive data assets in the industry by combining proven direct

Acxiom explains, allows it to leverage "our expertise in consumer information and consumer behavioral segmentation to help marketers target and deliver personalized advertising messages…. Relevance-X helps you deliver the right message to the right audience where consumers are today—online…. Unlike traditional consumer segmentation systems, PersonicX is built and applied at the consumer household level, not at a ZIP Code™ or block group."[166]

Online targeting now also involves the use by marketers of sophisticated techniques that merge user data with information about our psychological or emotional behaviors.[167] For example, Mindset Media "lets advertisers define their targets on 21 standard elements of personality and then reach those targets on a mass scale in simple online media buys…. A MindsetProfile will identify the psychographics that drive your brand, your category, and even your competitors." Such targeting is available over one ad network that reaches "150 million unique viewers each month across more than 1,500 sites globally."[168]

So-called "Predictive Behavioral Targeting" has also emerged, which is described as a "technology that tries to target ads not only based on people's click behavior but also on predictions about their interests and future behavior." Engaging in "real-time" data tracking and analysis, predictive BT "learns from user behavior in realtime" and can be "exploited" for interactive marketing.[169] One U.S. predictive behavioral marketer explained that its new "Precision Profiles" product uses "…a wider spectrum" of data for such targeting, including "including web browsing, ad

---

marketing techniques segmenting individuals based on demographics, shopping patterns and lifestyle factors with the behavioral-based approaches of online targeting." Giselle Abramovich, "Acxiom Enters Digital Advertising with Acquisition of EchoTarget," *DM News*, 20 Sept. 2007, http://www.dmnews.com/Acxiom-enters-digital-advertising-with-acquisition-of-EchoTarget/article/98540/ (viewed 14 June 2009).

[166] Acxiom, "Acxiom Relevance-X," http://www.acxiom.com/PRODUCTS_AND_SERVICES/DIGITAL/RELEVANCE-X/Pages/Relevance-X.aspx; Acxiom, "The Power of Data: Acxiom Relevance-X Fact Sheet," http://www.acxiom.com/SiteCollectionDocuments/website-resources/pdf/Fact_Sheets/Relevance-X_FactSheet.pdf (both viewed 14 June 2009).

[167] For more on developments in the behavioral targeting market, see, for example, Behavioral Insider, http://www.mediapost.com/publications/?art_type=31&fa=Archives.showArchive; other useful sources include iMedia Connection, http://imediaconnection.com, and ClickZ, http://www.clickz.com/ (all viewed 14 June 2009).

[168] Mindset Media, "Media with Attitude," http://www.mindset-media.com/; Mindset Media, "Our Products," http://www.mindset-media.com/advertisers/products/; Mindset Media, "MindsetProfile, http://www.mindset-media.com/advertisers/products/profiles/ (all viewed 14 June 2009).

[169] Predictive Behavioral Targeting, "What is PBT?" http://www.predictive-behavioral-targeting.com/what-is-predictive-behavioral-targeting/. For an animated overview of predictive behavioral targeting, see nugg.ad, http://www.nugg.ad/en/products/flash.html (both viewed 14 June 2009).

interaction, search and shopping behavior" that "results in more granular profiles."[170]

Semantic-based profiling (which relies on the tagging and analysis of Web pages) is also used. For example, Collective Media's "advanced audience behavior targeting" can use a "contextual classification engine" that analyzes "each page for the presence of over 2 million words and word combinations, and [uses] this analysis to categorize and/or tag pages into over 200,000 hierarchical categories.... Personifi's uniquely powerful ad optimization solution observes all available behavioral, contextual, demographic and other data to determine the most effective ad for each impression.... Personifi leverages this understanding to deliver the most relevant ads to individual users at the optimal times. Ad recommendations are continually optimized in real time based on observed behaviors and responses."[171]

The self-learning capabilities of contemporary interactive ad systems also raise important privacy and consumer welfare concerns. For example, "Meaning-Based Marketing" by one company "forms an understanding of the sentiment and context of all customer interactions, including social media, user-generated content and user interactions." It "creates a targeting system... based on deep profiles, sentiment, behavior, all major types of customer attributes, and the content and concepts."[172] An array of other data tools has emerged that is shaping the experience—and the deals and offers—available to the American consumer. For example, "Using web analytics," boasts online marketer Coremetrics, "businesses can clearly see a customer's path from an email opened to an online loan application, and everything browsed in-between.... Coremetrics Online Analytics provides the most accurate and complete record of visitor behavior—capturing every click of every visitor over time, and storing them in Cormetrics' LIVE (Lifetime Individual Visitor Experience) Profiles secure database. As a result, marketers can build a comprehensive and accurate record of online visitor behavior—a record that connects visitor behavior over time, so they can see all the marketing interactions each visitor has with the company."[173]

---

[170] "ValueClick Media Launches Predictive Behavioral Targeting," press release, 21 July 2008, http://phx.corporate-ir.net/phoenix.zhtml?c=84375&p=irol-newsArticle&ID=1177051 (viewed 14 June 2009).

[171] Collective Media, "Targeting by Behavior," http://www.collective.com/targeting#behavior; Personifi, "Ad Network Optimization," http://www.personifi.com/ad_networks_optimization.html; Personifi, "Ad Network: Contextual," http://www.personifi.com/ad_networks_contextual.html; Personifi, "Ad Network Classification," http://www.personifi.com/ad_networks_classification.html (all viewed 14 June 2009).

[172] Interwoven, "Autonomy Optimost Adaptive Targeting," http://www.interwoven.com/components/pagenext.jsp?topic=SOLUTION::ADAPTIVE_TARGETING (viewed 14 June 2009).

[173] Coremetrics, "Optimizing Marketing Spend of Financial Services: Leveraging Analytics in Marketing Budget Allocation."

2.   Are there commonly understood or recognized consumer expectations about how information concerning consumers is collected and used? Do consumers have certain general expectations about the collection and use of their information when they browse the Internet, participate in social networking services, obtain products from retailers both online and offline, or use mobile communications devices? Is there empirical data that allows us reliably to measure any such consumer expectations? How determinative should consumer expectations be in developing policies about privacy?

A. Studies Show the Public is Concerned about Privacy Online

Surveys conducted by reputable organizations have highlighted two important findings: Consumers highly value data privacy, but they are confused about the available protection of that privacy. Few consumers really understand the data collection system and targeted advertising environment online. The University of Southern California's Center for the Digital Future found in its eighth annual "Surveying the Digital Future" project that "almost all respondents continue to report some level of concern about the privacy of their personal information when or if they buy on the Internet."[174] A poll from the Consumer Reports National Research Center found that "72 percent are concerned that their online behaviors were being tracked and profiled by companies."[175] Surveys by the University of Pennsylvania's Annenberg School of Communication and the University of California at Berkeley Law School's Samuelson Law, Technology & Public Policy Clinic also found confusion about customer data and customer privacy protections offered by businesses.[176] A 2008 Harris Interactive poll found that U.S. consumers "are skeptical about the practice of websites using information about a person's online activity to customize website content."[177]

A June 2009 study from the UC Berkeley's School of Information found that

---

[174] USC Annenburg School for Communication, "Annual Internet Survey by the Center for the Digital Future Finds Large Increases in Use of Online Newspapers," 28 Apr. 2009, http://www.scribd.com/doc/15015797/USC-Annenberg-School-Digital-Future-2009-Highlights (viewed 14 June 2009).

[175] Consumers Union, "Consumer Reports Poll: Americans Extremely Concerned About Internet Privacy; Most Consumers Want More Control Over How Their Online Information Is Collected & Used," 25 Sept. 2008, http://www.consumersunion.org/pub/core_telecom_and_utilities/006189.html (viewed 14 June 2009).

[176] Chris Jay Hoofnagle and Jennifer King, "Research Report: What Californians Understand About Privacy Online," 3 Sept. 2008, http://www.law.berkeley.edu/clinics/samuelsonclinic/files/online_report_final.pdf (viewed 14 June 2009).

[177] Harris Interactive, "Majority Uncomfortable with Websites Customizing Content Based Visitors Personal Profiles," 10 Apr. 2008, http://www.harrisinteractive.com/harris_poll/index.asp?PID=894 (viewed 14 June 2009).

... most of the top 50 websites collect information about users and use it for customized advertising. Beyond that, however, most contained unclear statements (or lacked any statement) about data retention, purchase of data about users from other sources, or the fate of user data in the event of a company merger or bankruptcy.

Sharing of information presents particular problems. While most policies stated that information would not be shared with third parties, many of these sites allowed third-party tracking through web bugs. We believe that this practice contravenes users' expectations; it makes little sense to disclaim formal information sharing, but allow functionally equivalent tracking with third parties.[178]

More recently, another study ("the first nationally representative telephone survey that explores Americans' opinions about behavioral targeting") found that 66 percent of Americans "do not want online advertisements tailored by marketers to their specific interests…. Not only that, when informed of specific behavioral targeting techniques that marketers employ to create the ads, even higher percentages— between 73 percent and 86 percent—oppose tailored advertising. Those techniques include tracking behavior on websites and in retail stores."[179] It seems clear, in other words, that if consumers were genuinely *aware* of the invasive marketing practices common on the Internet today, the vast majority of these Americans would have the same response: "No thanks."

B. Consumer Education and Awareness Campaigns Needed
While it is fine to speak of "consumer expectations" in the area of digital privacy, we must not overlook consumer *needs* in this area as well. Simply put, the overwhelming majority of consumers do not have the tools to exercise meaningful consent with regard to online advertising. First, the current system has been deliberately constructed to be opaque, with lengthy, arcane privacy policies and obscure opt-out procedures, because many online advertising companies know that if consumers were truly informed of the practices employed, they would likely not consent to such profiling and targeting. Second, even where consumers are instructed in the intricacies of rejecting or deleting cookies, they are invariably warned of the penalties involved. As online advertiser InterClick tells consumers, "You are always free to decline cookies, but by doing so you may not be able to use certain features on the websites or take full advantage of all the website

---

[178] "Consumer Advocacy Group Comments In the Matter of a National Broadband Plan for Our Future," Center for Digital Democracy, Privacy Rights Clearinghouse and U.S. PIRG, FCC Docket 09-51, June 2009, http://www.democraticmedia.org/node/405 (viewed 14 June 2009).

[179] "Americans Reject Tailored Advertising: Study Contradicts Claims by Marketers," 30 Sept. 2009, http://www.asc.upenn.edu/news/NewsDetail.aspx?nid=612 (viewed 29 Oct. 2009).

offerings…."[180] Third, cookie technology itself has evolved well beyond the grasp of most Internet users. As *Wired* magazine reports on a recent UC Berkeley study of cookie technology, "More than half of the internet's top websites use a little known capability of Adobe's Flash plug-in to track users and store information about them, but only four of them mention the so-called Flash Cookies in their privacy policies, UC Berkeley researchers reported….

> Unlike traditional browser cookies, Flash cookies are relatively unknown to web users, and they are not controlled through the cookie privacy controls in a browser. That means even if a user thinks they have cleared their computer of tracking objects, they most likely have not.
>
> What's even sneakier?
>
> Several services even use the surreptitious data storage to reinstate traditional cookies that a user deleted, which is called 're-spawning' in homage to video games where zombies come back to life even after being "killed," the report found. So even if a user gets rid of a website's tracking cookie, that cookie's unique ID will be assigned back to a new cookie again using the Flash data as the "backup."[181]

As the *Wired* article notes, Adobe's Flash technology, which is installed on an estimated 98 percent of all PC's, allows websites to store up to 100k of information on a particular user, or 25 times what traditional browser cookies can accommodate.

Thus companies should be required to develop a "plain vanilla" online disclosure statement prior to undertaking any data collection. Prominently placed on home pages and linked to easy-to-understand descriptions, these notices should inform consumers precisely what data are collected and how they are used. We are convinced there are effective ways to balance both the consumer protection and privacy interests of users with the need to ensure the continued robust growth of electronic commerce.

Even with such safeguards in place, the FTC should also consider undertaking a consumer education campaign designed to apprise consumers of the challenges and opportunities posed by online and mobile communications. Having been forced to endure a painful "crash course" in economics over the past two years, Americans would no doubt value a much gentler introduction to privacy in the digital age.

---

[180] InterClick, "InterClick Privacy Policy," http://www.interclick.com/PrivacyPolicyV2.aspx (viewed 25 Oct. 2009).

[181] Ryan Singel, "You Deleted Your Cookies? Think Again," *Wired*, 10 Aug. 2009, http://www.wired.com/epicenter/2009/08/you-deleted-your-cookies-think-again/; Askan Soltani, et al. "Flash Cookies and Privacy," 10 Aug. 2009, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1446862 (both viewed 26 Oct. 2009).

*3.	Do the existing legal requirements and self-regulatory regimes in the United States today adequately protect consumer privacy interests? If not, what are the particular privacy interests that warrant increased protection? How have changes in technology, and in the way consumer data is collected, stored, and shared, affected consumer privacy? What are the costs, benefits, and feasibility of technological innovations, such as browser-based controls, that enable consumers to exercise control over information collection? How might increased privacy protections affect technological innovation?*

A. Existing Regulations Must be Brought up to Date

Consumers should have complete control over the data that is collected about them. That's why an affirmative opt-in after full and meaningful disclosure is necessary. Companies should be required to completely inform consumers about what data will be collected and how that data will be used. This should include explaining to consumers how information might be added to their profile, such as data based on subsequent tracking or via amplification from outside sources. But sensitive information—especially financial, health, medical, and family-related (and data connected to children and adolescents in particular)—requires additional consumer safeguards. Nor should data on consumers be kept for more than 90 days, after which it should be destroyed. Consumers should have the right to renew their opt-in agreements every 90 days. But beyond consumer control, it is essential that the FTC now explore the data collection system that has been created for the online environment, including mobile marketing. Strict limits should be placed on what industry can do with certain data collection practices.

There should be uniform standards protecting consumers across the digital marketing/targeting industry. In a system where the baseline is the collection of data on individual consumers for a range of micro-targeting practices using very powerful, sophisticated, and largely stealth techniques across all platforms (and which is designed to influence behaviors and attitudes), meaningful safeguards are essential. Beyond these standards, to the extent that self-regulation works at all, companies will offer consumers competing and alternative approaches related to privacy protection. But the fundamental and primary protection, it is clear, must come in the form of enforceable federal regulations.

We are confident that the FTC is now ready to address online marketing and consumer privacy more meaningfully than it has in the past. Chairman Jon Leibowitz has already stated that he wants to see real progress on the issue. His appointment of highly regarded legal scholar and consumer advocate David Vladeck as the new director of the Bureau of Consumer Protection is a positive sign that the FTC will now take digital marketing issues very seriously.

Thus we urge the commission to adopt policies that will ensure that consumer privacy online is protected. The foundation for such protection should be the

implementation of Fair Information Practices for the digital marketing environment. Notice and Choice, which has been the basis of the self-regulatory regime, is a failure. Despite industry efforts at self-regulation (discussed below), what we have witnessed is steadily increasing data collection and use—all without the real, informed understanding and consent of users. Americans shouldn't have to trade away their privacy and accept online profiling and tracking as the price they must pay to access the Internet and other digital media. The failure to adequately regulate the financial sector greatly contributed to the worst economic crisis since the Great Depression. But regulation isn't a dirty word. On the contrary, such rules of fair play allow consumers and businesses to conduct their transactions with the assurance that the system is as honest and accountable as possible.

The uncertainty over the loss of privacy and other consumer harms will continue to undermine confidence in the online advertising business. That's why the online ad industry will actually *benefit* from privacy regulation. Given a new regulatory regime protecting privacy, industry leaders and entrepreneurs will develop new forms of marketing services where data collection and profiling are carried out in an above-board, consumer-friendly fashion. Consumer and privacy groups have already pledged to work closely with Congress to help draft a law that balances the protection of consumers with the interests of the online marketing industry. (See, for example, the open letter and legislative primer concerning online behavioral tracking and targeting that ten consumer advocacy groups recently submitted to members of the House Committee on Energy and Commerce.)[182] We are equally eager to lend whatever support we can to the FTC in its efforts to address this important issue.

B. The Failure of Industry Self-regulation
It should be evident to all that self-regulation to protect consumer privacy online has been a dismal failure, and the FTC must have the courage to admit this. After all, it wasn't until CDD/USPIRG and other consumer groups filed well-publicized complaints (and helped create a public outcry over the privacy implications of the Google/DoubleClick deal) that the FTC finally issued its privacy principles in 2007.[183] And it took such pressure to awaken the National Advertising Initiative (NAI) and its members from the deep freeze of inaction, belatedly scrambling to "enhance" their "Self-Regulatory Code of Conduct, a set of binding Principles that has governed members since 2001."[184] Since its inception, the NAI had been asleep

---

[182] "Letter to House Committee on Energy and Commerce Urging Enactment of Consumer Privacy Guarantees," 1 Sept. 2009, http://www.democraticmedia.org/letter/waxman-barton-letter-20090901; "Online Behavioral Tracking and Targeting: Legislative Primer September 2009," http://www.democraticmedia.org/doc/privacy-legislative-primer (both viewed 29 Oct. 2009).

[183] "FTC Staff Proposes Online Behavioral Advertising Privacy Principles," http://www.ftc.gov/opa/2007/12/principles.shtm (viewed 31 Oct. 2009).

[184] "The NAI Releases the updated 2008 NAI Principles," http://www.networkadvertising.org/networks/principles_comments.asp

at the digital self-regulatory "switch." Otherwise we would not have had the ever-growing personalized data collection, profiling, and targeting apparatus that NAI's members so enthusiastically embraced. The NAI, it should not be forgotten, was only created to head off serious action by the FTC back in 2000 as a result of the growing concern with online profiling.[185]

The revised NAI principles reveal how the group remains incapable of ensuring the protection of consumer privacy. They also demonstrate how the NAI cannot be relied on to offer the FTC—or the public—independent and honest proposals that would protect consumers from contemporary online data collection practices. For example, its revised principles—sadly—define sensitive information is the narrowest of terms: "Social Security Numbers or other Government-issued identifiers; Insurance plan numbers; Financial account numbers; Information that describes the precise real-time geographic location of an individual derived through location-based services such as through GPS-enabled devices; Precise information about past, present, or potential future health or medical conditions or treatments, including genetic, genomic, and family medical history."[186]

The NAI and its members know full well that copious amounts of data relating to the financial and health status of consumers is currently being collected. Indeed expenditures for online financial marketing alone was $3 billion in 2008. The collection of consumer information resulting from online lead generation—which saw some $1.7 billion in spending last year—is deeply connected to data about a person's interest in loans or credit.[187] A growing business in online pharmaceutical marketing is also actively harvesting consumer data, for purposes that include behavioral targeting. If the NAI were a serious independent entity capable of protecting consumers, it would have effectively articulated how sensitive information should be protected.

NAI's narrow definition of personally identifiable information (PII) is out of touch with online marketing reality: "PII includes name, address, telephone number, email address, financial account number, government-issued identifier, and any other data used or intended to be used to identify, contact or precisely locate a person."[188] We urge the commission to examine NAI members' sites so it can view for itself the stark discrepancies between what is promised advertisers in terms of personalized consumer targeting and the NAI's purposefully narrow and inaccurate definition of PII.

---

[185] "Federal Trade Commission Issues Report on Online Profiling," 27 July 2000, http://www.ftc.gov/opa/2000/07/onlineprofiling.shtm (viewed 31 Oct. 2009).

[186] National Advertising Initiative, "2008 NAI Principles," p. 6, http://www.networkadvertising.org/networks/2008%20NAI%20Principles_final%20for%20Website.pdf (viewed 31 Oct. 2009).

[187] "IAB Internet Advertising Revenue Report: 2008 Full Year Results," Mar. 2009, http://www.iab.net/media/file/IAB_PwC_2008_full_year.pdf (viewed 31 Oct. 2009).

[188] National Advertising Initiative, "2008 NAI Principles," p. 5.

Finally, we find it absurd that all the NAI could do in serving the privacy interests of young people is to conform to the legal standards of the Children's Online Privacy Protection Act. (COPPA is a law CDD's executive director played a key leadership role in helping pass in 1998.) It is unfortunate that the NAI could not offer new safeguards for children, including policies to protect adolescent privacy.

Unfortunately, the "Self-Regulatory Principles for Online Behavioral Advertising," released in July 2009 by the American Association of Advertising Agencies, Association of National Advertisers, Council of Better Business Bureaus, Direct Marketing Association, and the Interactive Advertising Bureau, are equally inadequate.[189] While an improvement over the stance embraced by the IAB in 2008, when it claimed there were no privacy concerns related to behavioral advertising, the new principles cannot be relied on to protect consumers.[190] Its "Sensitive Data" principle in particular, much like the NAI's, is so inadequate that the FTC should consider bringing an Unfair and Deceptive Complaint against its authors. There are only two categories of information listed under the sensitive principle: Children and "Health and Financial Data." Under the latter, AAAA et al's principle is simply that "Entities should not collect and use financial account numbers, Social Security numbers, pharmaceutical prescriptions, or medical records about a specific individual for Online Behavioral Advertising without Consent."[191] Again, this flies in the face of what the members of these groups actually do when collecting health and financial data for online advertising. As for protecting children, the AAAA and its associates—like the NAI—simply endorse the legal framework already required by COPPA. But by failing to address adolescent privacy, the AAAA et al. reveal that they are really concerned only with maintaining the data collection/profiling/targeting status quo.

As the history of self-regulation of the media in the U.S. makes clear, we need strong baseline laws and regulations to ensure serious industry compliance. That's why this new proceeding must lead to FTC action that will ensure that consumer privacy online is finally safeguarded.

---

[189] "Self-Regulatory Principles for Online Behavioral Advertising," July 2009, http://www.iab.net/media/file/ven-principles-07-01-09.pdf (viewed 31 Oct. 2009).

[190] Randall Rothenberg, "War Against the Web," *The Huffington Post*, 21 Apr. 2008, http://www.huffingtonpost.com/randy-rothenberg/war-against-the-web_b_97811.html (viewed 31 Oct. 2009).

[191] "Self-Regulatory Principles for Online Behavioral Advertising," p. 17.