13 July 2012

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Via ECFS

Re. CC Docket No. 96–115

Telecommunications Carrier's Use of Customer Proprietary Network Information and Other Customer Information

Dear Secretary Dortch:

The Center for Digital Democracy (CDD) is pleased to have this opportunity to comment on the privacy and data security practices of mobile wireless services providers with respect to customer information stored on their users' mobile communications devices. As one of the leading nonprofit advocacy organizations working on behalf of consumer privacy, CDD has been actively involved in this issue in both the online and mobile arenas. Working in collaboration with U.S. PIRG, for example, CDD filed formal complaints with the Federal Trade Commission in 2006 and 2007, exposing threats to consumer privacy from such online advertising practices as behavioral profiling and targeting.[1] These two petitions played a key role in spurring the FTC to open up an inquiry into online marketing. In 2009, we amended those original complaints with a new, 52-page filing formally requesting

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[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," 1 Nov. 2006, http://www.centerfordigitaldemocracy.org/sites/default/files/FTCadprivacy_0_1.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.centerfordigitaldemocracy.org/sites/default/files/FTCsupplemental_statement1107_0.pdf. See also 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 July 2012).

the FTC to extend its online privacy proceeding to include mobile communications, focusing on five key aspects of mobile marketing: behavioral targeting, location-based targeting, user tracking/mobile analytics, audience segmentation, and data mining.[2] Specifically, our 2009 mobile complaint requested the FTC to address four vitally needed consumer safeguards:

- Require True Notice and Disclosure of data collection on mobile devices.
- Redefine "Unfair and Deceptive" practices in the mobile marketing arena.
- Review Industry Self-Regulation
- Protect Youth from Unfair or Deceptive Practices on mobile devices

Today, sadly, more than three years after our initial mobile filing, many of the same problems continue to threaten consumer privacy. And the growing popularity of vastly more powerful smart phones—now fully half of the U.S. mobile market—poses additional threats.[3] Mobile marketers continue to expand their mobile and location data collection practices with insufficient regard to consumer privacy—placing the public at risk. Given the growing use of mobile phones and locational applications delivering critical services involving personal finances and health information, it is incumbent on the FCC (and FTC) to develop safeguards that empower the public to be in charge of mobile data collection.

The FCC's review of the mobile landscape is long overdue—the agency has lagged in ensuring mobile consumers are treated fairly by the marketplace. In the following pages we will highlight a number of consumer privacy and protection concerns. But the commission should recognize that there is a relationship between the carriers and the mobile marketing service platforms. While its regulatory authority focuses on network operators, in order to understand how mobile practices are conducted, it needs to analyze the common business practices that shape the mobile ecosystem.[4]

We want to emphasize three main points that should inform the FCC's inquiry into the privacy and data security practices of mobile wireless services providers. First, mobile devices, no longer a luxury or merely an option, have become a *fundamental*

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[2] 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.centerfordigitaldemocracy.org/sites/default/files/FTCmobile_complaint0109_0.pdf (viewed 12 July 2012).

[3] "State of the Appnation—A Year of Change and Growth in U.S. Smartphones," Nielsen Wire, 16 May 2012, http://blog.nielsen.com/nielsenwire/online_mobile/state-of-the-appnation-%E2%80%93-a-year-of-change-and-growth-in-u-s-smartphones/ (viewed 23 May 2012).

[4] See, for example, Google, "Our Mobile Planet Tool," http://www.thinkwithgoogle.com/insights/tools/our-mobile-planet-tool/ (viewed 13 July 2012).

part of the communications and marketing landscapes—increasingly integrated into the broader cross-platform system of digital marketing, data collection, and targeting.[5] Second, these devices are *unique*, with specially designed user interfaces that raise significant consumer protection and privacy issues. Third, the growth of the "*mobile marketing ecosystem*," and the rise of locational targeting, pose new challenges to consumers as they confront sophisticated and non-transparent techniques designed to collect and manipulate their information for marketing and other purposes[6]

I. Mobile is Fundamental

The mobile phone has become a fundamental device, used by consumers for a variety of tasks, including critical transactions related to finances and health. As we noted in our 2010 FTC filing on pharmaceutical marketing, "According to recent surveys, some 60 to 80 percent of Americans have used the Internet to find health information, and as of January 2008, the Internet rivaled physicians as the leading source for health information."[7] Increasingly, users are turning to smart phones to find such information. Already over half (57 percent) of smart phone users engage in banking transactions, a number that is sure to grow as smart phone become more common.[8] Additionally, "Mobile payments are becoming increasingly popular, with 34 percent of survey respondents having made a purchase using their mobile phone compared to 19 percent a year ago, according to a new report from IDC."[9]

As interactive ad agency Rocket Fuel put it, "Mobile is everywhere. Desktops and laptops are no longer a prerequisite to surf the Web, engage in rich media or

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[5] Samantha Podos Nowak, "Mobile Will Require Advertisers to Redefine How They Measure Success," Google Agency Blog, 11 July 2012, http://adwordsagency.blogspot.com/2012/07/mobile-will-require-advertisers-to.html (viewed 13 July 2012).

[6] IAB, "Mobile Rising Stars Ad Units," http://www.iab.net/risingstarsmobile; Mobclix, "Meet the Advertising Partner You've Always Wanted," http://www.mobclix.com/advertisers.html (both viewed 13 July 2012).

[7] Jane Sarasohn-Kahn, "The Wisdom of Patients: Health Care Meets Online Social Media," Apr. 2008, p. 3, http://www.chcf.org/~/media/Files/PDF/H/HealthCareSocialMedia.pdf (viewed 16 June 2010).

[8] "Free Report—Digital Trends: Consumer Behavior in Key Financial Sectors," Compete Pulse, 25 May 2012, http://blog.compete.com/2012/05/25/free-report-digital-trends-consumer-behavior-in-key-financial-sectors/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+Compete Blog+%28the+Compete+Blog%29 (viewed 12 July 2012).

[9] Chantal Tode, "Mobile Payment Use Nearly Doubles in a Year: Report," Mobile Commerce Daily, 20 July 2012, http://www.mobilecommercedaily.com/2012/07/10/mobile-payment-use-nearly-doubles-in-a-year-report (viewed 11 July 2012).

purchase products. Smartphones have fueled the growth of getting information on the go. People are consuming mobile media at a voracious pace. As dollars shift from traditional media to the Web, the next shift will be from the Web to mobile as the primary way to reach certain users, locations or audiences."[10] In the process, all of the privacy issues that have raised red flags in the online arena will be flying high in the mobile context—with the added complication, as we have seen, of location-based marketing and so-called "geo-fencing."

In the words of mobile marketer Velti, "Reaching your audience wherever they are has never been easier. Consumers are personally attached to the devices they carry with them, and many are connected around the clock. Whether your goal is to build brand awareness, develop additional engagement channels, or drive extra revenue opportunities, the time to make an impact with mobile is now."[11] Clearly, now is also the time to find regulatory solutions to protect consumer privacy in the fast-paced mobile environment, which not only brings the power of computers to our pockets, wherever we go, but also brings new complications because of that unprecedented portability.

II. Mobile is Unique

The mobile device is unique, not only for the power that it provides its users on the go, but also for what it withholds—sufficient screen size, for example, to give the user proper context for the information they require to make truly informed decisions. In some instances, as with transactions that involve personal health and finances, such information can be critically important. It was for this reason that CDD, in its 2010 filing with the Food and Drug Administration, concurred with Consumers Union that smart phones in general (and social media in particular) were ill-suited to the delivery of either mandatory adverse-effect information or purely promotional messages for prescription drugs.[12]

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[10] Rocket Fuel, "Rocket Fuel Mobile Booster," http://rocketfuel.com/solutions/mobile-booster (viewed 11 July 2012).

[11] Velti, "Marketers & Agencies: Overview," http://www.velti.com/marketers.html (viewed 11 July 2012).

[12] Center for Digital Democracy, "Written Comments: Promotion of Food and Drug Administration-Regulated Medical Products Using the Internet and Social Media Tools," Food and Drug Administration filing Re: Docket No. FDA-2009-N-0441, 28 Feb. 2010, http://www.democraticmedia.org/online-drug-marketing-fda-filing (viewed 12 July 2012). In his November 2009 testimony before an FDA hearing, Consumers Union's Steve Findlay declared that "...the advent of smart phones, ever-ready internet, digital media, new means of person-to-person communication (Text, Twitter, etc), and the Internet's evolution to become a vast social networking medium have all posed new questions about how drug information and promotion is shared. Email, text messaging and social networking sites pose different challenges. We don't believe drug or device companies should be engaged in any promotion of their products via direct email or text messaging to consumers, blast

Content on mobile devices, moreover, is carefully developed and analyzed via A/B comparison testing, eye-tracking, and the like to ensure that consumers respond to marketing and other data collection practices. It's a rigorously pre-arranged medium, in other words, calculated and refined to elicit the desired consumer response. "Eye tracking can reveal the effectiveness of email campaigns, mobile ad banners, landing pages, and game advertising," the research firm Tobii Technology explains. "Moreover, it can help companies to optimize mobile advertising to limited screen sizes, touch screens and mobile users' behavior."[13]

In particular, according to Google-sponsored research, eye tracking reveals the following unique aspects of mobile communications:

- The traditional above and below the fold does not exist on a mobile website; the screen is scrolled and checked carefully.
- Mobile advertising is an effective way of capturing people's attention and are similar in effectiveness to desktop adverts.
- Although people view mobile websites for less time than when using a desktop, their attention is more focused.[14]

Diminished screen real estate notwithstanding, marketers enjoy new power in the carefully honed mobile context. Thus website optimization firm SiteSpect promises to give "marketers a new level of control over targeted content delivery, enabling them to discover how varying types of mobile-optimized content influence user behavior, and ultimately site profitability. These mobile web best practices give web and mobile marketers and analysts the ability to test, measure, and ultimately deliver the content, layout, and promotional offers that are most effective for each mobile device category. SiteSpect's mobile analytics capability allows you to target your tested content using a combination of static and dynamic criteria...."[15] Digital

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email or email list- serves, chat rooms, or social networking bulletin boards that are operated by third parties. Period. The only legitimate use of such tools to communicate directly with consumers is via a company's own Web sites. And in that case, we believe full 'fair and balanced' information rules should apply." Steve Findlay, "Statement of Consumers Union, FDA Public Hearing on Promotion of Medical Products via the Internet and Social Media," 13 Nov. 2009, http://www.fda.gov/downloads/AboutFDA/CentersOffices/CDER/UCM195845.pdf (viewed 16 Feb. 2010).

[13] Tobii Technology, "Advertising Research and Eye Tracking," http://www.tobii.com/eye-tracking-research/global/research/advertising-research/ (viewed 11 July 2012).

[14] Google, "Eye Tracking Study Comparing Mobile and Desktop," July 2011, http://www.thinkwithgoogle.com/insights/library/studies/eye-tracking-study-comparing-mobile-and-desktop/ (viewed 11 July 2012).

[15] SiteSpect, "Mobile Analytics, Targeting & Site Optimization," http://www.sitespect.com/mobile-web-optimization.shtml. See also SiteSpect, "A/B Split Testing Benefits," http://www.sitespect.com/non-intrusive-a-b-testing.shtml; SiteSpect,

marketing, is at the heart of the mobile advertising system. The FCC must review the design techniques used to drive consumers through the "purchasing funnel" via mobile and locational technologies. It should identify mobile screen design and data collection practices that are unfair and deceptive to consumers, and propose appropriate new safeguards.[16]

III. The Mobile Marketing Ecosystem

A mobile marketing ecosystem has emerged, in short, one involving carriers, online ad and mobile targeting platforms and exchanges, apps, social media, and a growing range of other mobile services. The integration of a user's mobile data into the pervasive tracking and targeting environment made possible through ad exchanges, demand-side platforms, and other "real-time buying" services underscores the serious threats to mobile privacy today's consumers confront.

As Krishna Subramanian, co-founder of Mobclix (a division of Velti) explains, "Audience buying has been evolving through behavioral targeting. Today, on mobile, it exists in its most elementary state. Data is the main stopping point in making sure mobile audience targeting gets the same success as it has online. As audience buying becomes more prevalent across mobile advertising, it is crucial to consider the following key points:

1. Mobile Apps are the Future of Mobile Data - they will be a much better source of data in the future because identities persist throughout an app users lifecycle.

2. Website Publishers Will Become More Integrated with Advertising Providers - advertisers will need to gain access to first-party data because only first-party cookies are available.

3. Server Side Data Processing Will Become More Important - An increase in processing and user targeting will be crucial on the server because of data siloing between apps and websites. The majority of the data-share power circle could be controlled by publisher platforms, analytics companies and gaming networks.

"Multivariate Testing and Multivariable Testing," http://www.sitespect.com/multivariate-testing.shtml; SiteSpect, "Using Multivariate Testing to Optimize Mobile Sites," http://www.sitespect.com/sitespect-mobile-data-sheet.shtml (all viewed 11 July 2012).

[16] "IAB Releases MRAID 2.0 for Public Comment: Updated 'Mobile Rich-Media Ad Interface Definitions' Propels the Mobile Ad Serving Ecosystem Forward," 11 July 2012, http://www.iab.net/about_the_iab/recent_press_releases/press_release_archive/press_release/pr-071112?gko=3fd40 (viewed 13 July 2012).

"Mobile audience buying in the near future will allow advertisers to buy across platforms and devices thus linking data from cell phones to desktops to TVs. However, tying data to devices without the use of cookies will be the key!"[17]

As Subramanian's statement suggests, one of the difficulties in assessing the mobile marketing ecosystem is that it is still very much in formation, evolving daily with innovative features and services, new devices and delivery systems.[18] Fueling much of this growth are new ad formats such as the following winners of the recent IAB "Mobile Rising Stars" competition: Filmstrip ("Scrollable, multipanel, horizontal or vertical ad unit"), Slider ("Overlay unit on the bottom of a page mirrors touch screen habit, prompting users to slide the entire page over, unveiling a full brand experience"), Adhesion Banner ("Standard banner that 'adheres' to its start position when device is rotated or when content is manipulated"), Full Page ("Full screen experience that accommodates both portrait and landscape orientation"), and Push ("A bottom or top banner that expands to full screen").[19]

But whatever form it ultimately takes, and even if the mobile marketing revolution will not be televised, it will most certainly be monetized. As Rob DeMillo, CTO at 4INFO observed during a session on "How to Harness Realtime Mobile Data" at the 2011 AppNation Conference, "Foursquare and Twitter are sitting on a huge pile of

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[17] Quoted in John Ebbert, "Is Audience Buying Possible In Mobile Advertising?" AdExchanger, 3 Aug. 2011, http://www.adexchanger.com/mobile/audience-buying/ (viewed 11 July 2012).

[18] "The Mobile Marketing Ecosystem is comprised of 4 interconnecting strategic spheres–Product & Services (brands, content owners and marketing agencies), Applications (discrete application providers and mobile ASPs), Connection (aggregators and wireless operators), and Media and Retail (media properties, 'brick 'n' mortar' and virtual retail stores). Various enablers provide the foundation for each particular sphere. Players within these spheres work in concert to deliver a rich experience to consumers. The Mobile Channel Value Chain is the path by which the actual mobile communication and interactivity takes place between the Product & Services Sphere and mobile subscribers (consumers), however, consumer demand must first be established. To create this demand, products, services, events, and content programs are promoted through the Media and Retail Sphere's various traditional channels." Mobile Marketing Association, "Mobile Marketing Ecosystem," http://www.mmaglobal.com/resources/mobile-marketing-ecosystem. For discussions of the broad impact the mobile platform will have on online communications and commerce, see Google, "Mobile Movement," Think with Google, http://www.thinkwithgoogle.com/insights/search/?q=Mobile%20movement#/insights/search/?q=Mobile movement (both viewed 11 July 2012).

[19] "IAB Reveals Winners of First-Ever 'Mobile Rising Stars' Competition," 27 Feb. 2012, http://www.iab.net/about_the_iab/recent_press_releases/press_release_archive/press_release/pr-020227_mobilerisingstars (viewed 11 July 2012).

data—data that's monetizible and highly predictive."[20] Social networking sites like Twitter and Foursquare are typical of the entirely new landscape that is emerging, one in which real-world landmarks and mobile technology intersect, as products like Digby Localpoint make clear:

> Digby Localpoint enables brands to create geo-fences around their stores and other points of interest and embed those geo-fences into the brand's app. Digby then leverages its patent pending technology to measure app engagement and events such as geo-fence entries/exits, store visits, UPC/QR Code scans and other key shopping-oriented events triggered through the app as the consumer visits the store and uses their smartphone to find and research products to enhance their in-store shopping experience. The brand can then deliver rich, targeted messages in real-time for these various events directly to the branded app through a robust marketing campaign creation and management system. Digby Localpoint Outreach enables brands to directly communicate with consumers through their branded app to drive loyal customers to specific locations with regional or local promotions. Brands can send unique "Deal of the Day" offers that are time and location sensitive where it is most logical for consumers to receive them—close to where they work, live and play. Consumers can buy on the spot through Localpoint Storefront or be driven directly to the store.[21]

The coordinates of these marketing geo-fences, along with the consumers they hope to encircle, are all based on data points, untold millions of granular insights aggregated, assembled, and analyzed for the purposes of personalized advertising. And on the mobile platform, as on Internet marketing over the past two decades, the advertising engine runs on personal data—bought, borrowed, or simply stolen while consumers weren't looking.

IV. Data Collection is Key

In the mobile universe, data are collected from the devices themselves, as well as from the sites one visits and the apps and mobile services one uses. Such data collection is amplified through third-party data providers, some of which combine

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[20] LeeAnn Prescott, "Realtime Mobile Data—An Untapped Goldmine," Appnation, 29 Apr. 2011, http://appnationonline.com/realtime-mobile-data-an-untapped-goldmine/ (viewed 12 July 2012).

[21] "Digby Launches Localpoint Platform Bringing Location-Based Mobile Marketing, Analytics and Commerce to Branded Rich Apps," 16 Jan. 2012, http://www.digby.com/digby-launches-localpoint-platform-bringing-location-based-mobile-marketing-analytics-and-commerce-to-branded-rich-apps/ (viewed 11 July 2012).

online and offline files. Ethnic and racial data are also collected, as marketers attempt to appeal to specific demographic groups.[22]

Apple's recent rejection of apps that sought access to UDIDs momentarily threatened to undermine the business models of some mobile marketers.[23] "But," as Ansible's Gabriel Cheng notes,

> there is hope. As tracking and privacy become standardized, companies are developing new technologies for targeting. Some are experimenting with "device fingerprinting" which is masking the UDID in order to target based on a user's in-app behavior. For example social network apps can provide a lot of rich data based on what users are tweeting or following. Or publishers with large registered audiences have the opportunity to monetize their desktop data to mobile if they log into both environments. For example Yahoo has a tremendous overlap with their logged in audience. We are even beginning to see creative ways of IP bridging or the use of the phone's HTML5 storage.[24]

Already, new user ID schemes are emerging in the mobile arena, according to Wes Biggs, co-founder and CTO of Adfonic:

> Two key working groups that emerged early on were ODIN (a very Nordic-Saga-sounding acronym for Open Device Identification Number) and OpenUDID. The former has been set up to provide a forum for widespread adoption of alternative device identifiers across multiple platforms, with an initial view to using the in-built 802.11 (i.e. WiFi) MAC address of iOS devices as a seed for the unique identifier. As this value is accessible from all iOS applications, it's effectively a drop-in replacement for UDID, but shares many of the same privacy concerns. OpenUDID, in contrast, focused on a method whereby a randomised identifier could be created for each user, and

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[22] See, for example, Google, "Google GlobalHue Digital African-American Dynamic Whitepaper," Aug. 2011, http://www.thinkwithgoogle.com/insights/library/studies/google-globalhue-digital-african-american-dynamic-whitepaper/; Google, "Five Truths of the Digital African American Consumer," June 2011, http://www.thinkwithgoogle.com/insights/library/studies/five-truths-of-the-digital-african-american-consumer/; Nielsen, "The State of the African-American Consumer," http://www.nielsen.com//us/en/insights/reports-downloads/2011/state-of-the-african-american-consumer.html; Google, "US Hispanics," http://www.thinkwithgoogle.com/insights/library/all/?cat=us-hispanics (all viewed 11 July 2012).

[23] Thorin Klosowski, "What a UDID Is and Why Apple's Rejecting Apps that Want Yours," Lifehacker, 2 Apr. 2012, http://lifehacker.com/5898282/what-a-udid-is-and-why-apples-rejecting-apps-that-want-yours (viewed 12 July 2012).

[24] Quoted in Ebbert, "Is Audience Buying Possible In Mobile Advertising?"

internally uses the copy-and-paste functionality of iOS to correlate usage between applications.

In addition, a number of alternative tracking methods have emerged, primarily focused on ensuring the continued availability of install tracking functionality. While brand-led rich media and video engagement models are picking up steam in the mobile display space, campaigns driving app store installs as the conversion action continue to be the bread and butter of mobile performance advertising. Solutions such as AD-X, an imprint of Mobile Future Group, and MobileAppTracking, a spin-off of online affiliate tracking company HasOffers, have gained traction. Each uses proprietary technology to enable attribution, and works in varying degrees across different mobile ad networks and buying points.[25]

As mobile advertiser StrikeAd points out, "There are solutions on the market right now that allow advertisers and agencies to very precisely track and attribute downloads, conversions and even in-app events such as frequent use, purchases, game level completion and much more…. The answer is not a single solution or a magic bullet, but a combination of approaches and technical solutions, which together deliver the required result…. Cookies actually work fine on most mobile devices, especially on all the main ones, and more importantly, ones which have app stores and apps, such as iPhones, iPads, Android powered ones, BlackBerries, Nokias etc."[26]

AdTruth ("The superior solution to the crumbling cookie problem") offers another variation on this theme, dispensing with UDID's and cookies alike while assuring mobile marketers that they can "catch up with [their] moving target":

As the mobile market grows, visibility dwindles. Conventional tagging technology just can't keep up. Now AdTruth brings the rapidly proliferating mobile segment into clear sight. AdTruth's patented device recognition technology ID's all devices that connect to the Internet, including smartphones, tablets, game consoles and native apps…. AdTruth empowers mobile marketers to target more precisely for maximum campaign yields.[27]

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[25] Wes Biggs, "Keeping Up With UDID Changes," ExchangeWire, 30 Apr. 2012, http://www.exchangewire.com/blog/2012/04/30/keeping-up-with-udid-changes/#more-17215 (viewed 11 July 2012).

[26] StrikeAd, "Who Needs the UDID? Demystifying Conversion Tracking in the Mobile World," http://www.iabuk.net/sites/default/files/white-paper-docs/StrikeAd%20App%20Tracking%20White%20Paper%20%282%29.pdf. iProspect offers a similar mobile cookie-based approach, focusing on retargeting campaigns. Kerri Smith, "Demystifying Mobile Retargeting," iProspect, http://www.iprospect.com/tag/iprospect-mobile-retargeting (both viewed 12 July 2012).

[27] AdTruth, "Mobile," http://www.adtruth.com/mobile.html (viewed 11 July 2012).

The result of these efforts is that precision targeting is now standard in the mobile arena, with offerings such as Poynt's "Hyper-local advertising" typical of the field:

> Targeting Poynt's Community of Users
> Advertising in Poynt means you can target your message by:
>
> - Search term(s)/keywords
> - Category
> - GEO (location, time zone, place)
> - Proximity
> - Radius setting
> - Behavioral and demographic – with over a billion data points on users' search activity within our data warehouse, we can target in aggregate based on search patterns.
> - Localized language
> - Weather and DMA[28]

Rocket Fuel's Mobile Booster is a similar product, promising to go "beyond traditional mobile buys by harnessing the intelligence of data-driven online ads and leveraging those insights to create a custom audience profile—purpose-built to engage mobile audiences with your brand…. Mobile Booster taps into Rocket Fuel's extensive Mobile Network—providing access to more than 8,000 premium publishers and reaching more than 80-million unique users a month, across all major platforms including Apple, Android and Blackberry devices. Our Network offers brand and direct response advertisers a combination of WAP (sites and pages) and APP (in-application) mobile content."[29]

V. Mobile Industry Self-Regulation

Mobile industry codes of conduct and various other self-regulatory approaches have all failed to ensure that consumers are protected. The commission will discover, for example, that such principles as those developed by the Mobile Marketing Association and other groups fail to reflect data collection practices in the marketplace. Even a rudimentary investigation into mobile marketing practices will show that the data collection system has been structured without regard to consumers.[30]

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[28] Poynt, "Why Advertise with Poynt," http://www.stockhouse.com/Bullboards/MessageDetail.aspx?p=0&m=30377604&l=0&r=1&s=PYN&t=LIST (viewed 11 July 2012).

[29] Rocket Fuel, "Rocket Fuel Mobile Booster."

[30] See, for example, Mobile Marketing Association, "Consumer Best Practices Guideline," http://www.mmaglobal.com/policies/consumer-best-practices (viewed 13 July 2012).

VI. Adolescents Require Special Safeguards

Teens are at the epicenter of a power digital marketing environment, with mobile and mobile-related social media applications at the core. Recent research into adolescent cognitive development underscores the limits in a teen's ability to regulate emotional responses, deploy impulse control, and manage peer influence and the need for immediate gratification. The marked vulnerability of adolescents to emotional stress or excitement, and their biological need for social connectivity, are key factors that make this group both a target for digital marketing initiatives on social media and a cause for concern by health experts. The commission should review the mobile landscape that specifically targets adolescents, and propose appropriate safeguards.[31]

VII. Carriers Have Expanded Mobile Marketing and Data Collection

AT&T, Verizon, and other carrier networks engage in the full range of mobile marketing and data collection practices that raise substantial privacy concerns. For example, Verizon's mobile marketing services enable "email captures" and other data collection.[32] AT&T AdWorks Mobile Audience Network features "the only source for insights based on quality AT&T subscriber data," consisting of "100 million subscriber connections."[33] The commission should also review leading mobile ad partners such as Google, Yahoo and Microsoft.[34]

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[31] See, for example, Institute of Medicine Board on Children, Youth and Families, *The Science of Adolescent Risk-taking: Workshop Report* (Washington, DC: National Academies Press, 2011); Laurence Steinberg, "Risk Taking in Adolescence: New Perspectives From Brain and Behavioral Science," *Current Directions in Psychological Science* 16, n. 2 (2007): 55-59; Kathryn C. Montgomery and Jeff Chester, "Interactive Food and Beverage Marketing: Targeting Adolescents in the Digital Age," *Journal of Adolescent Health* 45, n. 3 (Supplement, Sept. 2009): S18-S29, http://www.jahonline.org/article/S1054-139X%2809%2900149-9/abstract (viewed 9 July 2012).

[32] Verizon, "Advertising Community," http://www.verizonbusiness.com/solutions/vds/ad_enables/ (viewed 13 July 2012).

[33] AT&T AdWorks, "Engaging Mobile Marketing," http://adworks.att.com/mobile/; AT&T AdWorks, "The AT&T AdWorks Mobile Audience Network," http://i2.ypcdn.com/radiant/radiant_assets_30916_Mobile_Intranet_1824.pdf (both viewed 13 July 2012).

[34] Google, "Google Mobile Ads Blog," http://googlemobileads.blogspot.com/; Yahoo, "Mobile," http://advertising.yahoo.com/mobile/; Millennial Media, "Mobile Ad Marketing," http://www.millennialmedia.com/advertise/; Microsoft Advertising, "Mobile Advertising," http://advertising.microsoft.com/mobile-advertising; AdMob, "Build a Great App Business with AdMob," http://www.google.com/ads/admob/ (all viewed 13 July 2012).

The recent controversy over Carrier IQ should be viewed as emblematic of the mobile data collection system. Carrier IQ's "Insight Experience Manager" offered carriers access to "data directly from the mobile phone itself to give a precise view of how users interact with both their phones and the services delivered though them…. IQ Insight Experience Manager takes customer experience profiling to another level, enabling you to view the experience data at any level of granularity from the entire population… down to individual users, all at the touch of a button. This data is updated in real time…."[35] Clearly this illustrates the many privacy issues that the commission must tackle.

Conclusion

We would note, finally, that just as industry self-regulation has generally failed to offer a full measure of protections in the online arena generally, so have industry pledges in the mobile arena specifically fallen short.[36] Certain groups of users, moreover—and here we are thinking specifically of teens—are especially vulnerable in the mobile environment, and thus require special safeguards.[37]

In this context, then, we hope that the FCC will work with the FTC in their efforts to bring order to what threatens to become an increasingly lawless mobile marketplace. The FCC should explore regulatory relief on behalf of consumer

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[35] Carrier IQ, "IQ Insight Experience Manager," http://www.wired.com/images_blogs/threatlevel/2011/12/ExperienceManager.datasheet-1.pdf (viewed 13 July 2012).

[36] See, for example, "Consumer Watchdog Says Online Ad Industry Self-Regulation Fails to Protect Privacy; Calls for Congress to Enact 'Do Not Track Me' Law," PR Newswire, 29 Aug. 2011, http://www.prnewswire.com/news-releases/consumer-watchdog-says-online-ad-industry-self-regulation-fails-to-protect-privacy-calls-for-congress-to-enact-do-not-track-me-law-128606193.html; Nancy J. King and Pernille Wegener Jessen, "Profiling the Mobile Customer—Is Industry Self-Regulation Adequate to Protect Consumer Privacy When Behavioural Advertisers Target Mobile Phones?—Part II," *Computer Law and Security Review* 26, n. 6 (2010): 595-612, http://propid.ischool.utoronto.ca/wp-content/uploads/2011/04/kingjessen2.pdf (both viewed 12 July 2012).

[37] See, for example, C. Pechmann, L. Levine, & S. Loughlin, et al., "Impulsive and Self-conscious: Adolescents' Vulnerability to Advertising and Promotion," Journal of Public Policy & Marketing 24, n. 2 (2005): 202-221; Frances M. Leslie, Linda J. Levine, Sandra E. Loughlin, & Cornelia Pechmann, "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, http://digitalads.org/documents/Leslie_et_al_NPLAN_BMSG_memo.pdf (viewed 12 July 2012).

welfare.[38] It should support calls for new legislation to ensure consumers are protected in the mobile locational data-targeting era.

In all three areas, CDD and its nonprofit colleagues stand ready to assist the commission in this vitally important endeavor.

Respectfully submitted,

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[38] See, for example, Trans Atlantic Consumer Dialogue, "Protecting Mobile Privacy in a Hyper-local World," May 2012, http://www.surfer-haben-rechte.de/cps/rde/xbcr/digitalrechte/TACD_RESOLUTION_-_Protecting_Mobile_Privacy_in_a_Hyper-local_World.pdf (viewed 12 July 2012).