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THE DANCE OF PRIVACY

For Marketers – and Their Investors – Handling Online Privacy is a Subtle Art

IN THE WANING DAYS OF 2010, TIME MAGAZINE REVEALED ITS PERSON OF THE YEAR. THE SELECTION SURPRISED ALMOST NO ONE: FACEBOOK'S MARK ZUCKERBERG. UNDER ZUCKERBERG, FACEBOOK CHANGED THE WAY NEARLY HALF OF ALL AMERICANS, AND HUGE NUMBERS OF OTHERS AROUND THE GLOBE, SPEND TIME ONLINE, DO BUSINESS AND CONDUCT THEIR SOCIAL LIVES.

Just as significant, perhaps, is the way Facebook has changed the nature of online data, and led us to redefine the line between public and private information. Amid all the sharing, the very content of the Web has become personal. We post pictures of our kids, network for jobs, conduct political debates, check in at a favorite cafe, buy shoes and diapers and real estate. We flirt and kvetch and rejoice. Shoppers who just a few years ago may have been wary about entering credit card info online now expect to be "remembered" at their favorite sites.

We post pictures of our kids, network for jobs, buy shoes and diapers and real estate. We flirt and kvetch and rejoice. Shoppers once wary about entering credit card info online now expect to be remembered at their favorite sites.

But we're still wary – and we have cause to be. Because, inevitably, someone is taking notes. Very good notes.

The explosion of personal data online has yielded opportunities for companies to deliver better-targeted advertisements and offer more relevant services, and to make the Web simpler and more hospitable for users. The sheer amount of user information gathered – Web pages perused, purchases transacted, friends tagged – is staggering. The catch comes with how that information is being stored, shared, sold, or otherwise exploited, and how users feel about this activity once they become aware of it.

While users love convenience, it's easy for advertisers to cross the fine line between personal and overpersonal. Over and over, in conversations and interviews, the word that comes up is creepy.

Of Two Minds

Users are, of course, of two minds about online privacy. As the stunning ubiquity of Facebook

shows, we love to share … and as the interest in and support for WikiLeaks shows (Julian Assange: another Person of the Year finalist), many of us want information to be free. But it would be disingenuous to equate information about governments or corporations with information about individuals. While users love convenience, it's easy for advertisers, for example, to cross the fine line between personal and a bit *too* personal. Over and over, in conversations and interviews, the word that comes up in this regard is *creepy*. It's great when Zappos recommends a pair of shoes much like the ones you were shopping for. But when those shoes start "following you around the Internet"? Creepy. Looking at recipes on weightwatchers.com? Great. But then ads for weight-loss products show up in the sidebar of half the sites you visit that week – and suddenly your response isn't exactly what the advertiser had in mind.

Advertisers: Walking a Fine Line

The issue has reached its highest pitch in display advertising. Beyond relying on contextual information, demand-side data providers for display advertising are aggregating information on user identity and even intent – making complex distinctions between individual shoppers looking for, for example, the cheapest Toyota truck vs. the most powerful Toyota truck. Placing persistent third-party cookies and other tracking tools such as beacons that allow them to compile amazingly detailed individual user profiles, advertisers and data providers have moved from serving ads targeted at large demographics, or perhaps psychographics, to ones pinpointed on individuals. The new normal: Two visitors to Amazon see two different book recommendations. But then they go to another website, and another. Each sees a pitch for a different credit card. Two mortgage financing offers. Two health insurance plans – or the same plan, at two different monthly premiums.

As reported in the *Wall Street Journal*, online advertising as a whole is a $23 billion industry, with display advertising making up a sizable share of that total. According to eMarketer, 14.2% of all display spending in 2010 had some behavioral component. By 2014, this figure is forecast to near 20%, with $2.6 billion in total revenue. Behavioral advertising is the province of a new breed of data aggregators; one of the most prominent, startup BlueKai, claims its customer numbers are doubling every three months.

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These changes call into question several widely accepted foundations of the Web: anonymity and equal access to content. Comments by industry executives – including the CEOs of Facebook and Google, who have more than once suggested that "privacy is dead" – have given users pause. Consumers worry about snooping, price discrimination and unwanted exposure

of online behavior (not to mention cataloguing of offline information, and what happens when the two data sets are combined). The issue of personal data in turn raises the specter of identity theft, and what happens when online and real-world privacy, or lack thereof, collide.

Microsoft, of course, is no stranger to the privacy wars. As the *Wall Street Journal* reported in August 2010, product planners and developers of Internet Explorer 8 planned to build a range of filtering tools into the newest version of the world's most popular browser, many designed to allow users to easily evade online tracking if desired. That was until Brian McAndrews, a Microsoft senior vice president who had run the online advertising firm aQuantive before Microsoft acquired it in 2007, took notice. The resulting internal debate, which grew to include issues of market share, competitors' mergers and Microsoft's role in the online advertising market, led the company to hobble the power of its InPrivate Filtering technology (which now must be launched with every browser restart). Score one for advertising.

The Funding Landscape: Opportunities and Pitfalls

Amid this complex and ever-expanding terrain of issues, this article explores four key trends in online privacy and the startup companies with the biggest impact in each space, based on 2010 funding. It then highlights the potential benefits and pitfalls Microsoft may face in acquiring or partnering with startups and other private firms that make use of personal data.

Funding trends in 2010 follow allotments in four major investment segments: personalized targeting platforms that specialize in mining social networks, third-party data and ad exchanges, data optimization and management services, and online privacy and security services.

Social Targeting Platforms, Networks and Exchanges

Mining data at the source is a powerful group of personalized targeting platforms, networks and exchanges that make use of data gleaned from online social networks such as Facebook and LinkedIn. A key trend in 2010 has been the willingness of first-party networks to make personal data available. Most notably, Facebook – bringing its base of 550 million users worldwide – launched Open Graph, designed to trace users' movements across the Web (users may opt out, but the process is less than straightforward). Meanwhile, major search engines Google and Bing began incorporating personalized search results, targeted display ads and instant feeds from social networks and microblogging applications such as Twitter.

The willingness of social networks and other sites to share, sell or exploit personal data has raised the concern of users. As of 2010, 80% of the Web's thousand most popular sites install tracking technology on users' computers, up from 40% in 2005, according to a *Wall Street Journal* series on technology and privacy. In fact, each of the top 50 U.S. websites installs an

average of 64 pieces of tracking technology. Data is not linked to an individual name, but is nonetheless detailed and specific. And while larger sites can maintain more control over their individual tracking policies, sites with less revenue often outsource advertising to networks or exchanges whose policies are not under their control – and which in turn install yet more tracking technology.

Platforms and networks specializing in social media monitoring and data collection have received significant funding in 2010. Such social targeting companies track users across social networks – usually assembling personal data dossiers around a persistent identifier such as an email or IP address. Foremost among funded companies, Rapleaf ($15.00M, Q4 2010) provides automated people search across social networks, compiling data by email address. The next two most prominent companies are Lotame Solutions (undisclosed, Q3 2010; $11.00M, Q4 2010) and 33Across ($1.28M, $20K, Q2 2010). More notable funding events in the social targeting platforms arena are detailed below.

TOP PLAYERS: SOCIAL TARGETING PLATFORMS, NETWORKS AND EXCHANGES

- Rapleaf ($15.00M, Q4 2010), automated people search across social networks

- Lotame Solutions (undisclosed, Q3 2010; $11.00M, Q4 2010), audience data segmentation and analytics

- Avvo ($10.00M, Q1 2010), vertical search engine aggregating reputation profiles about lawyers and doctors from publicly available online information

- NetBase ($2.37M, $7.03M, Q1 2010; $2.50M, Q4 2010), social media-based consumer data tracking and analysis

- Powered ($8.13M, Q1 2010), online marketing service on social media

- SafetyWeb ($8.00M, Q2 2010), social media monitoring service

- Sway, Inc./Shoutlet ($2.00M, Q1 2010; $6.00M, Q4 2010), Web-based software for social media marketing

- RatePoint ($7.00M, Q3 2010), Web-based software for online business reviews, email marketing and social media marketing

- Pursway ($6.00M, Q1 2010), marketing to influencers and opinion leaders

- Ad.ly ($500K, $10K, $5.00M, Q2 2010), targeting platform utilizing social networks

- Kontagent ($5.41M, Q2 2010), data analytics for social media applications

- Networked Insights ($4.56M, Q2 2010; $396K, Q3 2010), social media monitoring and analysis software

- Compass Labs ($4.00M, Q2 2010; $1.00M, Q3 2010), ad targeting platform within real-time social media

- Spredfast (Social Agency) ($1.60M, Q2 2010), Web-based software for social media marketing and management

- Klout ($1.57M, Q3 2010), influencer analytics

- Tracx ($1.50M, Q3 2010), platform for social media marketing to enterprises

- Crimson Hexagon ($1.32M, Q2 2010), platform for social media monitoring and analysis

- 33Across ($1.28M, $20K, Q2 2010), online marketing via social graph data analysis

- Sprout Social (undisclosed, Q2 2010; $1.00M, Q4 2010), software for social media marketing

- Nanigans ($601K, Q2 2010), performance-based advertising emphasizing social games and networks

- Empire Avenue ($200K, Q3 2010), measuring social influence on the Web

- SocialRep ($100K, Q3 2010), social media data tracking and analysis software

- EDITD by Stylescape Limited (€50K, Q3 2010), social media-based fashion data tracking and analysis software

- Spot Influence ($18K, Q3 2010), personal influence analysis software

- Punktilio (undisclosed, Q2 2010), social media marketing and media buying enterprise

- Mintigo (undisclosed, Q1 2010), mobile and social media customer data tracking and analysis software

Personalized Tracking Exchanges and Platforms

The display advertising ecosystem has shifted dramatically with the rise of data and ad exchanges – marketplaces where advertisers can choose publisher inventory on an individual impression basis, make real-time bids and target individual users rather than merely their associated cookies. These exchanges, which are quickly displacing the traditional brokering function of ad networks, are exemplified by the aforementioned BlueKai, which received $21.4 million funding in the first quarter of 2010. Notably, the data exchange offers users an opt-out through its website – which requires, however ironically, the user to register and download an opt-out cookie. Data exchanges and personalized targeting platforms have been a major area

of investment in the personal data space. Reply.com, another exchange, received $1.00 million in funding in Q1 2010 and $15.00 million in follow-on funding in Q2. More notable funding events in this segment are detailed below.

These private companies are joined by two targeting platforms that received undisclosed amounts of funding in 2010: Taykey, which provides ad targeting via analysis of real-time trending topics in social media, in Q2, and Yoyi Media, a China-based ad targeting platform, in Q1. The availability of IP data for hyperlocal targeting has also received attention. Examples of such companies funded in 2010 include hyperlocal ad platforms DataSphere ($10.81M, Q1 2010; $10.00M, Q3 2010) and Bering Media (undisclosed, Q1 2010).

TOP PLAYERS: PERSONALIZED TRACKING EXCHANGES AND PLATFORMS

- BlueKai ($21.4M, Q1 2010), data exchange

- Reply.com ($1.00M, Q1 2010; $15.00M Q2 2010), data exchange

- Criteo ($7.00M, Q2 2010), tracking exchange and ad re-targeting platform

- Resonate Networks ($5.00M, Q2 2010), psychometric-based targeting platform

- Magnetic (formerly DomDex) ($4.00M, Q2 2010), search retargeting ad network

- Lucid Commerce ($3.14M, Q2 2010), ad targeting, tracking and reporting software

- Collarity ($2.15M, Q1 2010), behavioral targeting and content recommendation engine

- Cross Pixel Media ($300K, Q2 2010), retargeting ad platform

Management and Optimization

In tandem with targeted data and ad exchanges, a new category has arisen – targeted ad management and optimization services that allow advertisers to manage massive amounts of personal data. A number of these companies received significant private investment in 2010. Marketo, a SaaS provider that integrates online marketing tools for B2B marketing automation and lead generation, received $10.00 million in Q2. More notable funding events in this area are detailed below.

TOP PLAYERS: MANAGEMENT AND OPTIMIZATION

- Marketo ($10.00M, Q2 2010), SaaS provider integrating online tools for B2B marketing automation and lead generation

- LeadPoint ($6.51M, Q3 2010; $150K, Q4 2010), online marketplace for business lead exchange

- Intela (£4.50M, Q1 2010), Web-based software for lead generation and email marketing

- Trada ($5.75M, Q3 2010), online marketplace connecting pay-per-click ad specialists with new campaigns

- XGraph ($3.75M, Q3 2010), audience-targeting ad optimization and analysis software platform

- Leadspace (formerly Data Essence Ltd.) ($3.00M, Q1 2010), lead generation

- Metamarkets ($2.50M, Q2 2010), online advertising price discovery

- ReachForce ($1.70M, Q1 2010), marketing lead generation and management software

- Marketfish ($1.50M, Q3 2010), Web-based lead generation software

- Quotify ($935K, Q2 2010), lead generation management platform

Online Privacy and Security Services

Not surprisingly, the rapid proliferation of targeting platforms and personal data exchanges has met with real resistance from users, journalists and watchdog organizations. A November 2010 exposé by the *Wall Street Journal* of Rapleaf and other online personal data brokers that link user data with individual names, for instance, led to a widely publicized backlash against politicians who used the service. And, as with any threat to privacy, user concerns have inspired yet another generation of online privacy and identity management services.

Several providers of services aimed at assuring online privacy received funding in 2010, most notably TRUSTe (True Ultimate Standards Everywhere), with $12.20M in Q2. Other major funding events include browser data encryption provider Quaresso Software ($777K, Q1 2010; $270K, Q4 2010) and Cryptolex, maker of privacy and reputation protection software ($300K, $100K, Q2 2010; $1.13M, Q4 2010). Substantial private investment also funneled into security services for personal data, with recipients including identity theft prevention provider CSidentity Corporation ($35.00M, Q1 2010) and CipherOptics ($800K, Q1 2010; $1.75M, Q2 2010; $1.00M, $14.27M, Q4 2010; $6.82M, Q1 2011), which offers network security solutions including policy and key management and encryption appliances. Further funding of online privacy and data security providers targeting both businesses and individuals is detailed below.

TOP PLAYERS: ONLINE PRIVACY AND SECURITY SERVICES (BUSINESS DATA)

- True Ultimate Standards Everywhere, Inc. (dba TRUSTe) ($12.20M, Q2 2010), online privacy services for businesses and individuals

- Cryptolex ($300K, $100K, Q2 2010; $1.13M, Q4 2010), privacy and reputation

protection software

- Quaresso ($777K, Q1 2010; $270K, Q4 2010), browser data encryption

- SAFE ID Solutions AG (undisclosed, Q1 2010), identity management system information storage, document management, and verification applications

TOP PLAYERS: ONLINE PRIVACY AND SECURITY SERVICES (PERSONAL DATA)

- CSidentity ($35.00M, Q1 2010), identity theft prevention services

- CipherOptics ($800K, Q1 2010; $1.75M, Q2 2010; $1.00M, $14.27M, Q4 2010), policy and key management and encryption appliances

- TrustDefender by Symbiotic Technologies (Aus $16.00M, Q1 2010), risk assessment and protection for online transactions

- Gigamedia Access Corp ($15.17M, Q3 2010), data protection software

- Solera Networks ($15.00M, Q3 2010), network forensics management applications

- Lifelock ($14.13M, Q2 2010), identity theft protection services

- Altor Networks ($10.00M, Q1 2010; acquired by Juniper Networks, Q4 2010), firewalls optimized for virtualized data centers and networks

- Okta ($10.00M, Q1 2010), cloud authentication and identity management services

- Symplified ($9.08M, Q3 2010; $7.00M, Q1 2011), identity and access management SaaS

- FireID (€5.00M, Q3 2010), secure authentication for websites via mobile devices

- AlienVault ($4.00M, Q2 2010), security information and event management software

- White Sky ($3.03M, Q2 2010), identity theft and fraud protection software

- SecureAuth Corporation ($3.00M, Q2 2010), application authentication software

- Mobilegov (€1.69M, Q1 2010), authentication based on personal electronic devices

- Digital Lifeboat ($2.00M, Q2 2010), data protection and security systems

- eiQNetworks ($1.00M, Q1 2010; $1.00M, Q3 2010), security, risk and compliance management systems

- Truedomain ($1.20M, Q2 2010), email authentication platform to prevent phishing

- Priva Technologies ($1.16M, Q2 2010), multi-factor authentication platforms

- Scio Security ($1.00M, Q3 2010), remote access and online transaction authentication systems

- Fugen Solutions ($75K, Q2 2010), federated identity management software and infrastructure

- Sequitur Labs (undisclosed, Q3 2010), security of data assets and digital life

- Mocana (undisclosed, Q2 2010), security platforms for non-PC, Internet-connected devices

- Data Security Systems Solutions (DS3) (undisclosed, Q2 2010), data security and authentication systems

Implications for Microsoft

In 2011, privacy will continue to be a shifting landscape, one with great potential to generate new companies and technology. Consumers, meanwhile, are highly ambivalent; as they learn more about the uses of personal data, that ambivalence has the potential to turn to acceptance – or to resentment and backlash.

With Internet Explorer 9, Bing and the potential for substantial personalized ad revenue, Microsoft now faces key strategic decisions in relation to how it approaches privacy and uses personal data – and how these decisions are perceived by both consumers and partners. Other heavyweights in the Web applications space, including Google and Facebook, have made major missteps (most notably, Google Buzz and Beacon) that severely eroded public confidence in each company's ability to use personal data responsibly. Without such trust, Microsoft will lose user loyalty to its flagship products, especially IE9, with potentially disastrous results. To prevail, Microsoft must walk a narrow path, taking into account the needs of partners and customers as well as the actions of its growing stable of subsidiaries. It must continue to innovate or acquire new technologies that let it mine user information and surface relevant information, while keeping its relationship with users at the forefront.

Advertisers and technology companies must remember that, in the end, ads that target consumer interests are valuable only to the extent that consumers respond positively to them

Most recently, Microsoft's online services division has focused on making Web search more relevant for individual users – focusing on user intent, then surfacing the information and tools that help each user complete a transaction or make an informed decision. To this end, in 2010 the company announced its collaboration with Facebook around "people search"; a person's Facebook "social graph" will inform his or her search results around specific topics. But personal relevance, too, is a double-edged sword: to gain its advantages, users must compromise some amount of privacy. Also, the very nature of the Web as open,

universal and accessible may be challenged by such "personal discoverability" – we don't yet know what we don't know and, if not handled carefully, such technologies could make it more difficult for us to find surprising, not-yet-discovered information. In its acquisitions and its internal development, Microsoft must keep this balancing act in mind at all times.

Finally, both advertisers and technology companies must remember that, in the end, ads that target consumer interests are valuable only to the extent that consumers respond positively to them. The "creepiness factor" is paramount here; users want to feel understood, but not stalked (those shoes again!) or shamed (uh, oh, there's another offer for debt consolidation – and one for hair loss remedies. I should just give up now). The industry as a whole needs to be both more creative and more sensitive: Respect users' needs and fears. Treat them as intelligent beings, and create scenarios in which information sharing benefits individuals as much as it does the companies that traffic in their information.

More Takes on Privacy

What They Know: This ongoing *Wall Street Journal* series investigates the ongoing collision of technology and privacy.

"Privacy policies are dead." In this TED talk, TrustE CEO Fran Maier calls for an evolving just-in-time approach to the challenges of online privacy.

"Long live the Web." In this Scientific American article, Tim Berners-Lee argues for the importance of the Web's open standards and neutrality – and delineates rising dangers to the medium, including both "walling off" information and government or corporate "snooping."

Facebook CEO Mark Zuckerberg, *Time* Magazine Person Of the Year

The Onion: Amazon.com Recommendations Understand Area Woman Better Than Husband

Super Sad True Love Story: Gary Shteyngart's hilarious, all-too-true novel of a near future in which Americans use small personal devices to continually broadcast their every thought, feeling and online purchase – not to mention real-time scores on everything from "hotness" to creditworthiness.

NAI (Network Advertising Initiative), a cooperative of online marketing and analytics companies addressing privacy concerns, offers users a one-stop way to opt out of targeted advertising from NAI member networks.

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