From:	Jeffrey Chester ██████████████████
Sent:	Friday, November 02, 2012 11:34 AM
To:	DeLorme, Christine Lee; Weinman, Yael; Davis, Anna; Kestenbaum, Janis
Cc:	Vladeck, David; Engle, Mary Koelbel; Marcus, Phyllis; Kresses, Mamie; Angela Campbell; Kathryn Montgomery
Subject:	research on kids websites, composition, for COPPA proceeding
Attachments:	New Research Demonstrates Problem with Proposed New Definition of Child-Directed .Websites.pdf; Kids Entertainment Fact Sheet Final jh_2.pdf

The Rudd Center at Yale subscribes to the comScore data service used by online marketers. We asked them to analyze comScore's "Entertainment-kids" product, which lists the leading child-directed websites (attached). Our attorneys at Georgetown University prepared an additional analysis reflecting questions we have raised in the COPPA proceeding about the definition of child-directed websites. We believe that the definition proposed by the Commission needs to be revised.

We are happy to discuss the research analysis and the specific definitional issues.

Many thanks,

Jeff

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New Research Demonstrates Problem with Proposed New Definition of Child-Directed Websites

The FTC has proposed to define a "Web site or online service directed to children" to include a commercial Web site or online service, or portion thereof, that:

> (b) based on the overall content of the website or online service, is likely to attract children under age 13 as its *primary audience*; or,

> (c) based on the overall content of the Web site or online service, is *likely to attract an audience that includes a disproportionately large percentage of children under age 13 as compared to the percentage of such children in the general population*; provided however that such Web site or online service shall not be deemed to be directed to children if it:

>> (i) Does not collect personal information from any visitor prior to collecting age information; and

>> (ii) prevents the collection, use, or disclosure of personal information from visitors who identify themselves as under age 13 without first obtaining verifiable parental consent;

In comments filed September 24, 2011, CDD *et al.* argued that because the italicized language is vague and undefined, many websites considered to be directed to children under current definition would no longer be considered child-directed under this proposed definition. The attached Rudd Center analysis, issued on October 17, 2012, clearly illustrates this problem.

The Rudd Center analyzed all websites classified by comScore as "Entertainment – Kids."[1] It used the comScore Media Metrix Key Measures Report to obtain the number of average monthly unique visitors to these websites during the first two quarters of 2012 for different age groups including ages 2-11 and 2-14.[2] Next, for each website with at least 100,000 unique child visitors (a total of 57 sites), the Rudd Center determined the percentage of unique visitors in each age group. The results are reported in Table 1. The Rudd Center concludes that the definition of child-directed sites as those with 30-35% of total visitors under age 12, which is used by members of the Children's Food and Beverage Advertising Initiative, does "not include many of the websites with child-targeted games and activities that are visited by large numbers of children."

This data also illustrates why CDD has concerns about the FTC's proposed definition. We start from the premise that the websites identified by comScore as "Entertainment – Kids" would be considered child-directed under the FTC's current totality of the circumstances test. As

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[1] A "dictionary team" from comScore examine websites and designates as kids' entertainment websites with activities and online games for children. comScore's methodology is relied on by advertisers who want to reach children.

[2] comScore does not have an age group 2-12, which corresponds precisely to COPPA's definition of children as under 13.

we explained in our comments, if the FTC fails to define what it means by "primary audience," in subsection (b), "website and online service operators could argue that primary means more than 50%. And if the Commission were to accept this claim, all but the youngest skewing children's websites would no longer be considered child-directed."

The comScore data supports this concern. The Rudd Center Report shows that only 3 of the 57 websites examined had an audience share of greater than 50% children aged 2-11 and only 14 had an audience share of greater than 50% children aged 2-14. This audience share data suggests that website operators could argue their websites do not have children as a *primary* audience.

Similarly, we are concerned that operators of child-directed websites could argue that their websites do not attract a *"disproportionately large percentage of children under age 13 as compared to the percentage of such children in the general population."* The Rudd Center found that children 2-11 make up 10% of the total internet audience and children 2-14 make up 14.9%. The FTC does not define what it means by disproportionately large percentage. Assuming that a "disproportionately large share" might mean twice the percentage of an age group of internet users, some of the children's websites identified by comScore would fall below that threshold. Indeed, 5 of the 57 websites had less than a 20% share of children 2-11 and 6 had less than 29.8 share of children 2-14.

These websites are clearly directed at children. For example, Disney Fairies, with an audience share of 19.7% ages 2-11 and 26.6% ages 2-14, has games and animated videos featuring Tinkerbell. It urges children to "create a fairy and fly." The website also provides a separate page for parents, indicating that the rest of the website is aimed at children. Similarly, National Geographic Kids, with an audience share of 17% ages 2-11 and 22.3% ages 2-14, is directed at children as indicated by the name of the website, as well as the child-oriented geography games and puzzles featured on the website. Likewise, Yahoo! US Kids is clearly intended for children even though its reported audience share is 16.4% ages 2-11 and 23.8% ages 2-14. It features popular cartoon characters such as the Teenage Mutant Ninja Turtles, Sesame Street characters, and Lego games. Thus, adoption of the proposed definition of child directed websites would have the unintended effect of exempting many websites that are in fact child-directed.

Defining child-directed websites: Implications for limits on food advertising to children through the Children's Food and Beverage Advertising Initiative (CFBAI)

October 17, 2012

Companies that participate in the CFBAI have pledged that they will only advertise healthier dietary choices on child-directed third-party websites.[1] The majority of companies define child-directed websites as those where 30% or 35% or more of total visitors are children under age 12.[2] This report examines children's entertainment websites to determine whether they would qualify as child-directed media according to CFBAI participants.

Methods

To identify child-directed third-party websites that would be covered by food companies' CFBAI pledges, we analyzed exposure data for all websites classified by comScore as "Entertainment - Kids" websites. comScore designates a website as kids' entertainment if the content includes activities and online games for kids, based on examination of the sites by their dictionary team. We used the comScore Media Metrix Key Measures Report to obtain the number of average monthly unique visitors to these websites during the first two quarters of 2012 for the following age groups: 2-11 years, 12-14 years, 2-17 years, and 2+ years.[3] To obtain the number of unique visitors in the 2-14 years age group, we added the numbers of unique visitors among youth 2-11 and 12-14 years. The report also provided unique visitors to all kids' entertainment websites and the total internet during the same time periods.

We analyzed all websites on the comScore Entertainment – Kids report that had at least 100,000 unique child visitors during either the first or second quarter of 2012. In most cases, we examined data for specific URLs (e.g., Nick.com, CartoonNetwork.com). However, some websites had sub-sites with a large number of child visitors, but the full website also contained a wide variety of content not targeted to children. In those cases, we examined the children's sub-sites instead of the full websites (e.g. Disney Entertainment instead of Disney.com, National Geographic Kids).

To compute monthly unique visitors for the six-month period (Jan-Jun 2012), we averaged the number of monthly unique visitors for both quarters of 2012 for each website. Average percent reach of all children for each site and all kids' entertainment sites was calculated by dividing the monthly unique visitors to the site by the monthly visitors to the internet for the same age group. Finally, we calculated child-audience share for each website, all kids' entertainment sites, and the internet by dividing the number of unique child visitors (for each age group examined) by all unique visitors to the sites. **Table 1** provides definitions of the key measures examined.

Table 1: Key measures

Monthly unique child visitors	Average number of unique individuals who visited each website per month during the period of January-June 2012 for three age groups: 2-11 years, 2-14 years, and 2-17 years
Percent reach	Average percent of children within each age group who visited the website each month
Child-audience share	Average percent of all unique visitors to a particular website who were from a specific age group

Results

A total of 73 different websites with at least 100,000 monthly unique child visitors (ages 2-11) were included on the comScore Entertainment - Kids' list during the first two quarters of 2012 (including sub-sites within Disney Entertainment). **Table 2** provides audience data for kids' entertainment websites with at least 200,000 average monthly visitors (2-14 years) during January-June 2012.

Five websites averaged more than 3 million unique child visitors per month in the first two quarters of 2012, and four of those sites were affiliated with children's media companies. On average, 4.8 million unique 2- to 11-year-olds visited Disney Entertainment websites every month during this period (22% of all 2- to 11-year-olds), and 3.9 million (18% of children) visited Nick.com and CartoonNetwork.com. CoolMath-Games.com and PBSKids.org averaged 3.6 and 3.1 million unique child visitors per month (14%-16% reach). Eleven additional URLs and three sub-sites of Disney Entertainment averaged 1 million or more unique child visitors per month (5%+ reach).

On average, 30% of unique visitors to kids' entertainment websites during January-June 2012 were children ages 2 to 11, compared with 10% of visitors to the internet in total. Child-audience share among the sites with 1 million or more unique child visitors per month ranged from 29% (FunBrain.com) to 46% (Roblox.com). The website with the highest child-audience share was BobTheBuilder.com, with 70% of total visitors between the ages of 2 and 11; while Rhymezone.com had the smallest child-audience share, at 10%. Twenty-two of the websites we examined (30%) had a child-audience share less than 30% and would not qualify as "child-directed" according to any of the CFBAI participating companies. Sites that do not qualify include MiniClip.com (2.0 million child visitors; 28% child-audience share), FunBrain.com (1.4 million child visitors; 29% child-audience share), and Disney Junior (0.6 million child visitors; 25% child-audience share).

If the definition of child-directed media was expanded to include 12- to 14-year-old visitors, all but 10 of the kids' entertainment websites we examined would be included. Just five sites with 200,000 or more unique 2- to 14-year-old visitors per month had a child-audience share less than 30%, including Disney Junior, Hasbro.com, TeenNick.com (390,000 unique 2- to 14-year-old visitors; 27% child-audience share), Disney Fairies (240,000 unique 2- to 14-year-old visitors; 27% child-audience share), and National Geographic Kids (238,000 unique 2- to 14-year-old visitors; 22% child-audience share). On average, 47% of unique visitors to kids' entertainment sites were under 18 years old, and the majority of visitors to approximately two-thirds of the sites were under 18.

Conclusions

Current definitions of child-directed websites used by CFBAI participating companies do not include many of the websites with child-targeted games and activities that are visited by large numbers of children. Companies must expand their pledges to advertise only healthier dietary choices on websites that are also visited by large numbers of children, as well as those with features designed to appeal to children.

Table 2: Average monthly exposure data for January to March 2012 and April to June 2012

	Ages 2-11			Ages 2-14			Ages 2-17		
	Total monthly unique visitors (000)	% reach	Audience share	Total monthly unique visitors (000)	% reach	Audience share	Total monthly unique visitors (000)	% reach	Audience share
Total internet	22,099	100.0	10.0	33,034	100.0	14.9	44,584	100.0	20.1
Entertainment - kids	20,180	91.3	30.0	26,766	81.0	39.8	31,630	70.9	47.1
Individual websites:									
Disney Entertainment	4,818	21.8	31.6	6,017	18.2	39.4	7,226	16.2	47.4
Nick.com	3,937	17.8	39.4	4,661	14.1	46.6	5,558	12.5	55.6
CartoonNetwork.com	3,936	17.8	45.0	4,554	13.8	52.1	5,250	11.8	60.0
Coolmath-games.com	3,608	16.3	39.4	4,391	13.3	47.9	5,216	11.7	56.9
PBSKids.org	3,115	14.1	41.5	3,464	10.5	46.2	3,857	8.7	51.4
Roblox.com	2,234	10.1	45.6	2,689	8.1	54.8	3,050	6.8	62.2
Poptropica.com	2,165	9.8	40.8	2,645	8.0	49.9	3,040	6.8	57.3
Miniclip.com	1,952	8.8	27.6	2,916	8.8	37.6	3,444	7.7	48.8
Disney Channel*	1,871	8.5	34.3	2,263	6.8	41.5	2,747	6.2	50.4
ClubPenguin.com	1,687	7.6	38.0	2,036	6.2	45.9	2,413	5.4	54.4
GirlsGoGames.com	1,559	7.1	31.7	1,965	5.9	39.9	2,488	5.6	50.6
Disney Games*	1,448	6.6	41.9	1,679	5.1	48.6	1,966	4.4	56.9
FunBrain.com	1,386	6.3	29.2	1,702	5.2	35.7	2,034	4.6	42.6
Wizard101.com	1,254	5.7	29.9	1,626	4.9	38.7	1,995	4.5	47.5
Starfall.com	1,136	5.1	44.8	1,276	3.9	50.5	1,402	3.1	55.5
Disney XD*	1,099	5.0	44.5	1,286	3.9	52.1	1,481	3.3	60.0
AGame.com	1,089	4.9	30.8	1,403	4.2	39.7	1,768	4.0	50.1
Barbie.com	1,059	4.8	48.4	1,220	3.7	55.7	1,385	3.1	63.2
MonkeyQuest.com	1,055	4.8	41.2	1,262	3.8	49.0	1,479	3.3	57.3
Webkinz.com	744	3.4	39.4	933	2.8	49.4	1,090	2.4	57.7
Disney Junior*	621	2.8	24.6	731	2.2	29.0	862	1.9	34.2
Mattel.com	620	2.8	47.5	701	2.1	53.7	798	1.8	61.1
Fantage.com	604	2.7	31.0	832	2.5	42.7	1,042	2.3	53.5
iCarly.com	468	2.1	43.0	556	1.7	51.2	667	1.5	61.5
NBAHoopTroop.com	464	2.1	52.1	538	1.6	61.1	611	1.4	69.7
TheSlap.com	462	2.1	44.1	569	1.7	54.2	697	1.6	66.4
Marvel.com	408	1.9	22.2	609	1.8	32.2	740	1.7	38.7
MonsterHigh.com	398	1.8	42.1	459	1.4	48.5	548	1.2	57.8
SproutOnline.com	345	1.6	45.4	407	1.2	53.6	438	1.0	57.7
Disney Create*	325	1.5	29.9	404	1.2	37.2	484	1.1	44.5
PBSKidsPlay.org	323	1.5	53.8	345	1.0	57.6	380	0.9	63.6
Disney Videos*	307	1.4	28.7	384	1.2	36.2	467	1.0	44.2
Hasbro.com	305	1.4	22.1	389	1.2	28.2	479	1.1	34.8
SesameStreet.org	278	1.3	38.2	344	1.0	47.4	372	0.8	51.2
Jumpstart.com	277	1.3	33.2	357	1.1	43.0	407	0.9	49.0
ChuckECheese.com	277	1.3	22.4	378	1.1	30.6	439	1.0	35.7

Site								
Neopets.com	274	1.2	26.0	391	1.2	37.0	506	1.1	47.9
Hubworld.com	258	1.2	38.5	322	1.0	48.1	375	0.8	56.1
OurWorld.com	257	1.2	20.8	505	1.5	40.9	662	1.5	53.7
PetPetPark.com	252	1.1	48.6	299	0.9	53.7	351	0.8	67.4
AmericanGirl.com	246	1.1	32.1	287	0.9	37.6	329	0.7	43.1
PollyPocket.com	238	1.1	48.8	276	0.8	56.6	322	0.7	66.1
AnimalJam.com	236	1.1	38.1	299	0.9	48.3	347	0.8	56.1
WoozWorld.com	231	1.1	27.1	413	1.3	49.8	489	1.1	57.6
Disney's Toontown Online*	228	1.0	38.7	281	0.8	47.5	337	0.8	57.0
HotWheels.com	217	1.0	56.4	240	0.7	62.3	258	0.6	67.1
Frootloops.com	204	0.9	43.4	232	0.7	49.5	273	0.6	58.2
KidsWB.com	201	0.9	46.5	249	0.8	57.5	274	0.6	63.5
Disney Fairies*	177	0.8	19.7	240	0.7	26.6	314	0.7	34.6
TeenNick.com	191	0.9	12.0	390	1.2	24.6	631	1.4	39.7
GanzWorld.com	180	0.8	39.6	230	0.7	50.4	269	0.6	58.9
National Geographic Kids	180	0.8	17.0	238	0.7	22.3	298	0.7	27.9
Yahoo! U.S. Kids	155	0.7	16.4	224	0.7	23.8	279	0.6	29.6
PencilKids.com	152	0.7	28.4	205	0.6	38.3	273	0.6	50.9
AOL KOL (Kids)	142	0.6	21.1	226	0.7	33.6	280	0.6	41.8
Kidzbop.com	135	0.6	29.4	205	0.6	44.6	256	0.6	55.1
RhymeZone.com	92	0.4	9.5	324	1.0	33.6	436	1.0	45.3

*Sub-site of Disney Entertainment
Shading indicates sites with a child-audience share less than 30%

Source: comScore Media Metrix Key Measures Report (January –June 2012)

References

[1] Kolish, E.D., Hernandez, M. & Blanchard, K. (2011, December). The Children's Food and Beverage Advertising Initiative in Action. Available at www.bbb.org/us/storage/16/documents/cfbai/cfbai-2010-progress-report.pdf
[2] Children's Food and Beverage Advertising Initiative (2012, March). Summary of participants' definitions of advertising primarily directed to children under 12 and policies on not directing advertising to children under 6. Available at www.bbb.org/us/storage/16/documents/cfbai/CFBAI%20Audience%20Definitions%20March%202012.pdf
[3] comScore (2012). Media Metrix Suite. http://www.comscore.com/Products_Services/Product_Index/Media_Metrix_Suite

From:	Jeffrey Chester ▮▮▮▮▮▮▮▮▮▮▮▮
Sent:	Tuesday, November 13, 2012 11:41 AM
To:	Vladeck, David; Engle, Mary Koelbel
Cc:	Kresses, Mamie; Marcus, Phyllis; Quaresima, Richard A.
Subject:	kids app targeting, Hasbro, Nick

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Marketing a Mobile App Success – My Little Pony

Paid App

Objective:
Market a successful launch of the new app.

Solution:
My Little Pony teamed up with WDA at the beginning of their launch, allowing us to integrate our full closed-loop marketing strategy. In conjunction with this and our mobileDSP™ we were able to analyze necessary data to optimize the campaign.

Result:
We generated over 13,000 downloads of the My Little Pony app in the first two weeks of campaign. Drove their ranking into top 5 in category.

http://wda.us/successes/marketing-a-mobile-app/marketing-a-mobile-app-success-my-little-pony

Brand Marketing – Spongebob

Objective:
To create an Advanced Personalization App for the brand to distribute for free as a tool to market the Spongebob Marbles and Slides game.

Solution:
WDA produced a fun and interactive Live Wallpaper and provided analytics to Nickelodeon, measuring daily and hourly installs of the Live Wallpaper, how many people clicked on the in-app promotion, and of those, how many were pushed to the game. In addition, this product is able to build a fan base via social media.

Result:
Campaign resulted in 63k downloads of the Live Wallpaper; 12k users clicked through from our app prompt to go view the paid game; achieving a 20% Conversion Rate.

App Download & Event Tracking

Impulse™ includes a complete set of APIs for use with Android and iOS. These APIs provide developers a simple suite of options for communicating critical data back into the platform, so that it is immediately available for reporting and analytics. Most importantly, the data is used to optimize the ad spending.

Impulse™ automatically finds the patterns that are creating quality conversions (the combinations of banner creative + placement + time-of-day + a dozen other attributes) and adjusts the campaign accordingly. Non-performing combinations are dropped, bids are increased or decreased, new creatives are constantly being tested and evaluated. All of this happens continuously as your campaign runs.
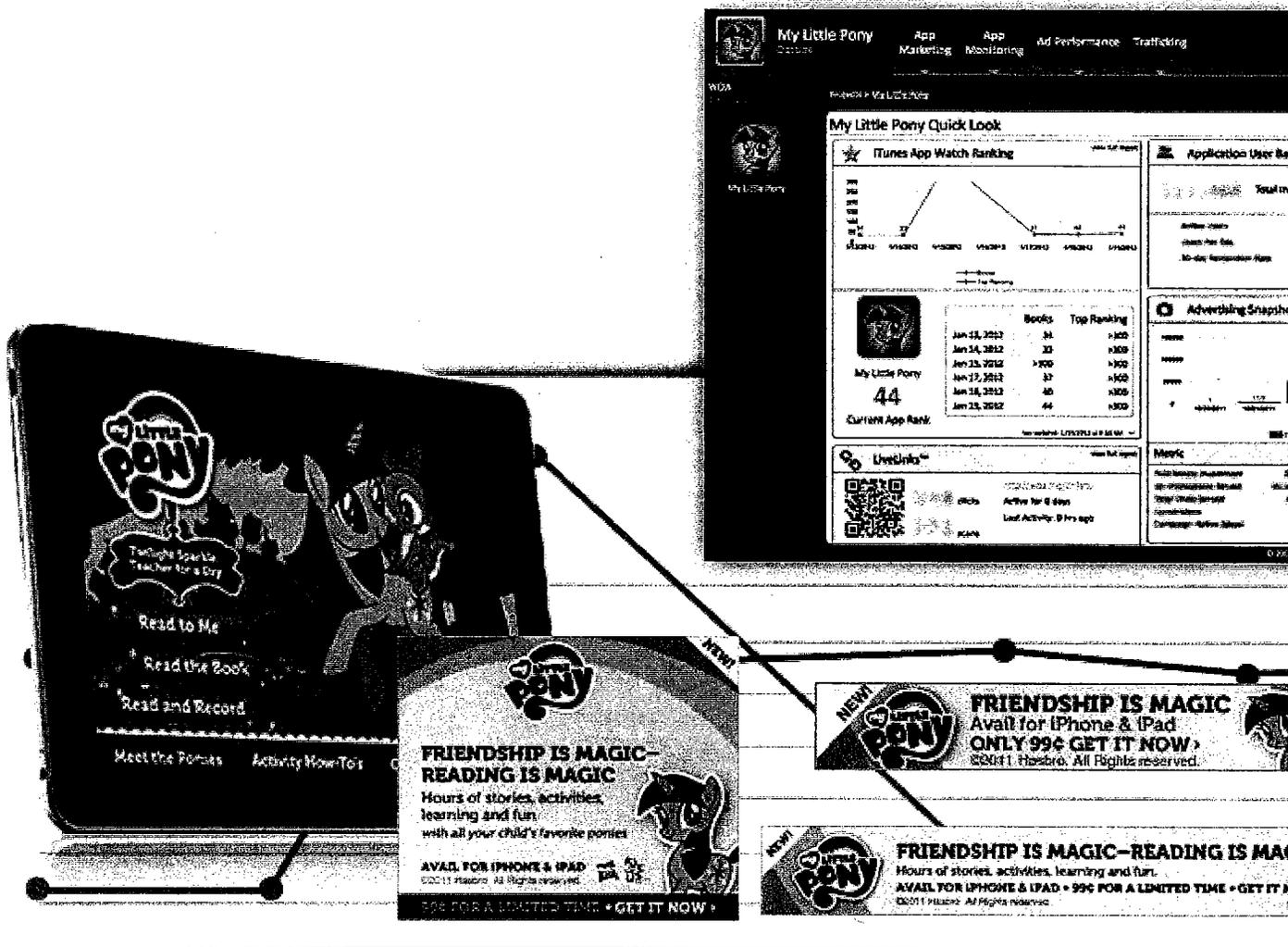
Developers can trigger any number of custom events to be used within Impulse™, including post-conversion data like in-app purchases. Rather than optimize the campaign on acquiring new downloads for the lowest price, Impulse™ can instead optimize on the most profitable and the most active users.

App Event Tracking APIs

There are two ways that an application or HTML5 site can send Events into the Impulse™ platform. For apps, WDA provides a Client-Side API available for iOS, Android, BlackBerry and others upon request. Implementing these APIs is very easy in that the developer includes a class library in their project and makes a few simple calls. The client-side API not only handles event tracking (which includes the initial conversion event), it also handles any number of custom events which are displayed within the Impulse™ Mobile Command Center. The API also handles notifications back to any number of mobile ad networks that request conversion data to optimize their placements. Therefore, implementing the client-side API will save you from implementing countless others and has several other benefits as well.

Impulse™ also supports server-side events sent via HTTP or HTTPS. This extends beyond the app marketing space into almost any conceivable system that could report conversion and activity events into Impulse™. For example, retail POS transactions, coupon redemptions, cross-platform opt-ins, and many more.

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http://wda.us/impulse/app-download-event-tracking/

see APP Store agreements: http://wda.us/partners/app-stores/

See ad network partners: http://wda.us/partners/ad-networks/

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More Companies Are Tracking Online Data, Study Finds

By NATASHA SINGER

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The number of trackers collecting data on users' activities on the most popular Web sites in the United States has significantly increased in the last five months, according to research from the Berkeley Center for Law and Technology at the University of California, Berkeley.

The Berkeley project, called the "Web Privacy Census," aims to measure online privacy by conducting periodic web crawls and comparing the number of cookies and other types of tracking technology found over time on the most visited sites.

During a test conducted on Oct. 24, researchers encountered cookies on every site included in a list of the 100 most popular sites compiled by Quantcast, an analytics and audience targeting firm.

On those 100 sites, researchers found 6,485 standard cookies last month compared with 5,795 cookies in May. In both months, third party trackers, not the Web sites themselves, set a majority of those cookies, the report said.

In October and May, cookies placed by DoubleClick, Google's ad technology service, appeared on the most sites on the top 100 list. ScorecardResearch, an analytics unit of comScore, was the second-most-prevalent tracker, the researchers reported.

The number of cookies on the top 1,000 and 25,000 Web sites also increased significantly, researchers said.

"More popular sites are using more cookies," the report said.

The Berkeley study comes at a time of fierce debate among federal regulators, advertising associations and consumer advocates over how best to regulate online tracking. Marketers advocate self-regulation, allowing consumers who wish to opt out of receiving ads based on data-mining to use an already-established industry program. Some consumer advocates are pushing for federal regulation as well as a "Do Not Track" mechanism that would allow Internet users to control tracking through settings on their own computer browsers.

Chris Hoofnagle, the director of information privacy programs at the Berkeley center and co-author of the study, said he hoped the data would set a baseline, providing all sides in the debate with empirical information as to the optimum method to regulate tracking.
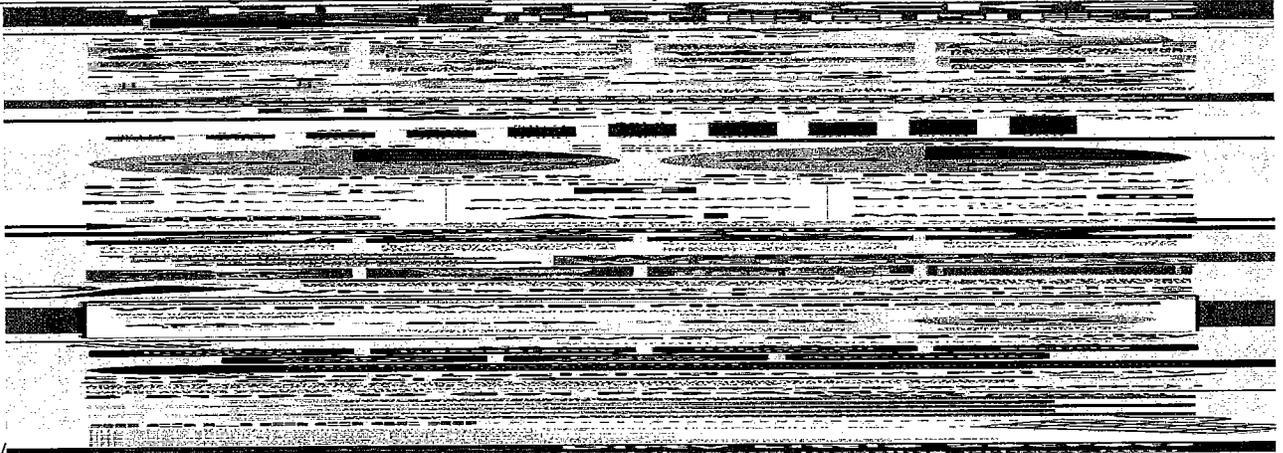
"I'm hoping that it will inform which approach is the best," Mr. Hoofnagle said. "We are not going to be well-served unless we measure these trends more rigorously."

From:	Jeffrey Chester
Sent:	Tuesday, November 13, 2012 9:53 AM
To:	Privacy Listserv
Subject:	tracking infographic, inc RTB

http://www.veracode.com/blog/2012/11/how-companies-track-you-on-the-web-

infographic/

see slideshow with McD and others as well: http://www.washingtonpost.com/business/technology/marketing-to-kids-what-makes-online-content-an-ad/2012/11/02/5a2a945c-2504-11e2-9313-3c7f59038d93_gallery.html

The Washington Post

When is a kids' online game actually an ad?

By Cecilia Kang, Published: November 2

Last spring, the International House of Pancakes launched an online children's game that was inspired by the Dr. Seuss classic "The Lorax." IHOP appeared to be serving up a hearty portion of advertising to children, too.

That was the conclusion of the ad industry's own standards police, the Children's Advertising Review Unit, which said IHOP's placement of menu items and its logo within the game made it too much like a commercial. The panel recommended last month that the firm disclose its marketing intentions to its young users.

But IHOP disagreed, saying the game was just for fun and didn't fit the traditional definition of an ad.

"We did not consider the game in question to be an advertising vehicle," the company, a unit of DineEquity, said in a statement, adding that it tries to be "sensitive to the issue of advertising to children."

The episode highlighted an increasingly thorny debate on how to monitor advertising aimed at children when they are confronted with so many new forms of marketing online.

If even the ad industry can't agree on the definition of an online ad, who can?

Kids spend more time than ever in front of screens beyond the living room television. Advertisers have responded with sophisticated ad campaigns that can start on the TV and then move to apps, social media sites and online games.

And federal regulators are struggling to keep up.

So far, the Federal Trade Commission doesn't regulate advertising to kids on these new platforms, except to ensure that marketing messages aren't false or misleading. The Federal Communications Commission limits ads on television but doesn't police the Web either.

That worries children's advocates, who say that the FTC and FCC may make distinctions but that to kids, a screen is a screen is a screen — and everything on it looks like entertainment to them.

"There is a great deal of research that shows children don't distinguish between content and advertising," said Kathryn Montgomery, a professor of communications at American University and an advocate of children's media protections. "Now on digital, there is the opportunity of more blurring of those lines, and the industry is pushing to keep definitions of online advertising broad and unclear."

Through these new digital channels, companies hope to cash in on some of America's biggest spenders. "Tweens," or children ages 8 through 12, are estimated to spend $43 billion a year out of their own pockets — and that's beyond the goods worth $155 billion or so that the kids pressure their parents to buy for them.

The IHOP Lorax promotion, for example, began with a TV ad that encouraged children to visit IHOP.com to participate in a sweepstakes promotion. Once they were on the site, the kids could see a video about a Lorax-inspired IHOP breakfast and play the "Save the Truffula Valley game," which promised that players who did well would get closer to "treating yourself and the Lorax to a delicious Lorax's breakfast at IHOP!"

Other companies follow the same strategy, where newspaper, radio, television and Web sites are used to get young users familiar with brands and products that they may buy on their own or pester their parents to buy.

Kellogg's Crunchy Nut cereal campaign earlier this year began with a TV tease introducing a new comical superhero described as "the man in yellow tights." Viewers were instructed to go to Facebook to learn more about the character and cereal.

"They have the strategy of reaching lots of kids by constantly bombarding them with brands," said Angela Campbell, a clinical education and communications law professor at Georgetown University who has filed a complaint accusing McDonald's and Subway of violating child privacy laws with their "tell-a-friend" Web games. "They want children to develop positive emotions about their brands early on."

That's also the case, ad industry experts say, with a new crop of informational advertising.

Procter & Gamble's "Being Girl" Web site, for example, has been lauded by the ad industry for creating a new category of online marketing with its portal chock-full of useful information and social networking tools tailored for developing girls. The site has articles about what girls can expect with their first period, how to talk with parents about menstruation, and the stages of physical development. It also advertises its Tampax and Always products — not only in what are clearly ads but also in casual references within advice columns.

Amid the swirl of marketing pitches, public interest groups say, there is lax oversight of digital marketing toward children. The FTC follows the lead of the Children's Advertising Review Unit, the self-regulatory body that monitors the Web and TV to ensure that ads are properly disclosed as marketing material to consumers.

When CARU can't get its industry members to agree to its actions, it refers cases to the FTC. In the case of IHOP's Lorax game, the promotion ended by the time CARU announced its findings.

"From the FTC standpoint, advertising can't be deceptive, and we think it is deceptive if an ad is not identified as an ad," said Mary Engle, an FTC attorney.

Fresh concerns about advertising to children online have reignited discussion of how children are more sensitive to marketing than adults.

CARU's panel of academics and former regulators says marketers have "special responsibilities when advertising to children or collecting data from children online. They should take into account the limited knowledge, experience, sophistication and maturity of the audience to which the message is directed."

Two decades ago, federal regulators recognized this difference and decided to put time limits on ads during children's television shows; the current limits are 10.5 minutes per hour on weekends and 12 minutes per hour on weekdays. The FCC also requires programmers to announce when a children's show is about to break for a commercial.

But determining just what content is an ad is much harder online than on television. On the Web, companies are able to embed marketing practices in more subtle ways. On Everloop, a social media site for children, brand campaigns are embedded into forums and pages on the site. Children can choose to become fans of pages such as designer Paul Frank's, in the same way a Facebook user can "like" Coca-Cola or Nutella fan pages.

One possible solution is printing disclosures. At the top of the colorful HappyMeal.com site, McDonald's displays in tiny letters: "Hey kids, this is advertising!" The site has 30 games for children, along with banner ads and promotions for its menu.

But the label is easy to miss, critics say. "It's unclear how useful these disclosures are. Their target audience often doesn't even read," Campbell said.

From:	Jeffrey Chester ~~████████~~
Sent:	Wednesday, October 31, 2012 5:16 PM
To:	Ramirez, Edith; Brill, Julie
Cc:	Kestenbaum, Janis; Weinman, Yael; Lupovitz, Joni; Engle, Mary Koelbel
Subject:	$1.2 trillion/kids buying power, says ad firm
Attachments:	20121031_The-Next-Generation-of-Consumers.pdf

Oct 12, 2012...Publicis/Digitas
excerpt:

we did our research, talked to our kids, and then brought a panel of five preteens (ranging from ages 10-13) onstage on Wednesday to find out what they really think. ...

Today's little kids and tweens having buying power to the tune of **$1.2 trillion per year**. [1]...

That $1.2 trillion figure isn't just about how much kids buy themselves—it also includes the degree to which they're influencing their parents' purchases. For instance, 60% of all tweens today have substantially influenced their parents' final decision on which car to buy...

Everyone on the panel either already had a cell phone or knew when they would be getting one. A couple of them cited cell phones as their main form of communication—but not via phone calls. It's all through text messages, Instagram, or other digital networks.
• When asked what social network they used the most, one girl specifically said Google+. She said that not a lot of her friends were on Facebook because that's where all their parents are—so they all use Google+ instead.
• We asked them if it's easy for them to hide what they do online from their parents, and a couple of them almost immediately replied yes—not reassuring for the parents in the audience. They said they either cleared their browser histories or just hid their phones.

THE NEXT GENERATION OF CONSUMERS

It goes without saying that a lot of brands are highly focused on reaching millennials. And why not? They fall into the sweet spot demographic of 18-34, and they're just hitting the workforce, so they have lots of new disposable income.

But in our research for FutureM, we found that what brands should really start planning towards isn't millennials—it's the generation that follows them. It's a generation that's thus far been unnamed, but is rapidly making their voices heard. Today's little kids and tweens having buying power to the tune of **$1.2 trillion per year.** [1]

What does that mean for brands and marketers? Well, it's impossible to truly predict exactly what this generation will do ten years from now, and what they'll buy. But as both marketers and parents, we did our research, talked to our kids, and then brought a panel of five preteens (ranging from ages 10-13) onstage on Wednesday to find out what they really think.

Here's what we observed, and predict:

THIS GENERATION IS MULTI-CULTURAL AND MULTI-INTEREST

Older cultural stereotypes are fading away—these kids wouldn't be surprised to see a vegan athlete who likes comic books. They're engaged in more ideas and interests than any generation before them.

Why? Because there's more opportunities available to these kids than any other generation. There's a ton of information at their disposal—digital has given them the tools to create anything they want. This generation is resourceful. They're makers. And because of that, brands need to be resourceful in the ways they try to reach them. We believe that these kids are going to make more and buy less, because they value that creation more than the actual purchase of a product. Brands will need to figure how to tap into that.

THIS GENERATION HAS MASSIVE INFLUENCE ON THE PURCHASING POWER OF ADULTS

That $1.2 trillion figure isn't just about how much kids buy themselves—it also includes the degree to which they're influencing their parents' purchases. For instance, 60% of all tweens today have substantially influenced their parents' final decision on which car to buy.[2] We've witnessed it in our own home: a big part of the reason we chose our new car was because the kids really liked the refrigerated center console, so that they could store their drinks and yogurt packs.

Our panel of tweens wasn't surprised. They admitted that it was pretty easy to persuade their parents into making purchases for them, be it a new case for their iPhone or a souvenir on vacation.

The fact is that we're treating our kids more like adults than ever before. In school and at home, they're exposed to more adult topics: discussions on poverty, war, the environment, and more. And because we're treating them more like adults, what we're seeing over time is that they're showing preference for adult things. When asked about their favorite brands, our panel replied H&M, Nike, and anything Avengers-related. They like the same brands that we do.

What does that mean for marketers? We believe that we'll see fewer multi-brands, and more mega-brands. We'll see less youth-specific offshoot companies, and that's okay. Because not only does this generation like the same brands that we do, but they're going to stick with them for a lifetime.
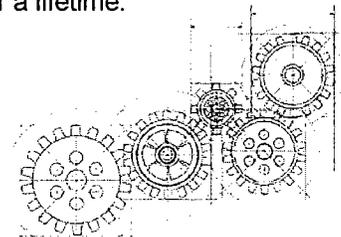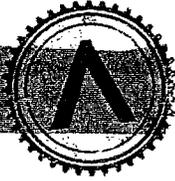
SOCIAL ALONE WON'T BE THE ANSWER

Social media plays a key role in reaching and engaging the next generation. But a social strategy doesn't equal social relevance—and relevance has a deadline. Brands today must be nimble and proactive, staying on top of what's trending in the news and what their audiences are talking about, so that they can stay relevant in the eyes of their consumers. That's the key to creating engagement.

We believe that this generation values experiences more than products. If your brand is playing a role in that experience, making it better, then they'll stick with it. But if not, they'll go elsewhere. Our panel of preteens bemoaned the fact that some of their friends post constantly on social networks when they don't actually have anything to say—they post updates just for the sake of posting. They also didn't like being bombarded with the same brand messages over and over again; to them, a video that's funny the first few times very quickly becomes stale and annoying. The takeaway is clear: brands need to focus on regularly providing fresh content that's relevant to their audiences, not content just for content's sake.

Here's some other interesting tidbits from our panel:
- Everyone on the panel either already had a cell phone or knew when they would be getting one. A couple of them cited cell phones as their main form of communication—but not via phone calls. It's all through text messages, Instagram, or other digital networks.
- When asked what social network they used the most, one girl specifically said Google+. She said that not a lot of her friends were on Facebook because that's where all their parents are—so they all use Google+ instead.
- We asked them if it's easy for them to hide what they do online from their parents, and a couple of them almost immediately replied yes—not reassuring for the parents in the audience. They said they either cleared their browser histories or just hid their phones.

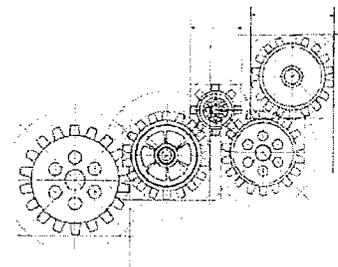[1] Lindstrom, Martin. "Tween marketing – it's no longer child's play!" ANA Magazine

[2] Lindstrom, Martin. "Tween marketing – it's no longer child's play!" ANA Magazine

CONTACT FOR MORE INFORMATION

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Jodi.Robinson@digitas.com

John Robinson, SVP, Creative, Digitas
John.Robinson@digitas.com

This piece originally appeared on BostInno.

From:	Jeffrey Chester ████████████████
Sent:	Sunday, October 28, 2012 12:36 PM
To:	Mithal, Maneesha; Olsen, Christopher; Weinman, Yael; Kestenbaum, Janis; Davis, Anna; Engle, Mary Koelbel
Subject:	useful glossary, data targeting of users

I think this can help counter the claim that some of ad collection for targeting is anonymous in the digital era. The glossary from leading Ad Exchange Appnexus describes ad networks DSPs, etc but has some useful descriptions of "User Data Store" and "User ID Mapping" which show it's about individuals. I have much more on how this system isn't anonymous, if you want.

https://wiki.appnexus.com/display/industry/Display+Advertising+Glossary

excerpts:

Ad Call: A user's browser asks an ad exchange or ad server to send an ad. The ad call includes information from browser cookies and ad tag information such as publisher ID, size, location, referring URL, etc. At AppNexus, an ad call is made to the Impression Bus.

Behavioral Data: Information on the kinds of sites a user visits, the search terms they use, etc. Using behavioral data, someone who looks at a lot of technology products can be served an ad for a computer when when they are on a sports site.

Cookie: A parcel of text sent by a server to the cookie file in a browser and then sent back unchanged by the client each time it accesses that server. HTTP cookies are used for authenticating, session tracking, and storing information about specific users, such as site preferences or buying habits. Advertisers often use cookies to track the number and frequency of advertisements that have been shown. See also First-party Cookies and Third-party cookies.

Cookie Store: Our server-side cookie and user data storage system. The cookie store may also store mapping between AppNexus user IDs and third party exchange and aggregator user IDs so we can identify a user's AppNexus ID during an ad call even when we don't have access to the user's browser.

Data: Information about users that makes them more valuable to advertisers. Data can include age, gender, location, intent to purchase, demographics, psychographics, wealth, past purchases, and more.

Impression Bus: The heart of the AppNexus platform, the Impression Bus is a server cluster that processes ad requests, feeds data to members, conducts auctions, returns ads to the publishers, keeps track of billing and usage, returns auction-result data, and enforces some basic quality standards. The Impression Bus is where all AppNexus participants come together and interact.

PII: Personally Identifiable Information. Information that can be tied to an actual named person, rather than an anonymous user ID. For example, name, social security number, or driver's license number.

Pixel: A pixel, also called a web bug, is a way to track user data. It is a snippet of code that calls for a 1X1 transparent pixel to be delivered to a webpage by a third party server. When the pixel loads, the third party server can record information such as the IP address of the user's computer, URL of the page, and time the page was viewed. See also Conversion Pixel and Segment Pixel.

Real-Time Advertising: In real-time advertising, an auction happens when a publisher ad tag is loaded from a webpage. Advertisers compete for that particular impression based on their individual valuation of the user's worth at that time on that site from that IP address. These valuations are submitted at the time of the auction, rather then far in advance of the auction.

Remarketing: Marketing to someone who has performed an action in the past, who may therefore be more likely to perform the same or a similar task in the future. For example, the advertiser Prostarr Sportswear might wish to put a segment pixel on their website and then target users who have visited their website in the past because they are more likely to make a purchase.

Segment: Members of a target audience identified based on the webpages they visit, the actions they take such as making a purchase, and data such as gender, location, or wealth.

Tag Container: Many advertisers and their media buyers use a number of tags for tracking impressions, clicks, conversions, and other data. Some use tag containers to manage these disparate pixel tags and make it easier to change them via a single source. When a page loads, the tag container code displays the code for all tags stored within the container.

Uniques: When you are counting page views, ad views or a variety of other web metrics, you may wish to separate out individual people vs. multiple actions taken by the same person. Uniques are the number of individual people being counted.

Unique User ID: This is a generic term used outside of AppNexus, but every user that AppNexus sees is given a unique user ID that is stored both in the user's browser cookie and in the AppNexus Cookie Store. This ID is not associated in any way with personally identifiable information (PII).

User: A target customer for advertisers; i.e. the person browsing the web who will see an ad.

User Agent: This usually refers to a browser application. For example, Mozilla 5.0 is a specific user agent.

User Data: Information about users, either behavioral or demographic. Please note that user data is generally associated with a UUID rather than any personally identifiable information. User data is distinct from contextual data. Often used interchangeably with segment data and audience data.

User Data Store: A place where data is stored on a user. In general parlance, this could refer to a user's browser cookie, but in AppNexus all user data other than user ID is stored server-side in the AppNexus Cookie Store.

User ID Mapping: Each buyer and seller may assign different IDs to a user. Without knowing that Seller S's user 'ABC' is the same as Buyer B's user '1234', it is impossible for B to value an impression from S. To solve this, every user that AppNexus sees is given a unique ID that is stored within the user's browser cookie. Then

AppNexus members or bidders may map this to their internal user ID with the AppNexus User ID Mapping service.

User Sync Pixel: AppNexus syncs user IDs with many of its supply partners in order to ID a user during an auction and apply frequency and receny and other decisioning data. This is done with user sync pixels. See also User ID Mapping.

|	
From:	Jeffrey Chester ███████████████████
Sent:	Friday, October 26, 2012 5:11 PM
To:	Engle, Mary Koelbel; Kestenbaum, Janis; Davis, Anna
Cc:	Laura Moy; Angela Campbell; Joy Spencer; Alan Simpson
Subject:	brand safety add'l resources (major DSP)

http://rocketfuel.com/solutions/brand-safety

Let's build a solution that puts safety first

Nothing gets bad attention like inappropriate content. Rocket Fuel goes beyond what industry guidelines prescribe, building additional levels of safety and security right into our platform and processes. So you get multiple levels of defense that ensure your ads are always in good company.

Real-time Brand-safety Shield
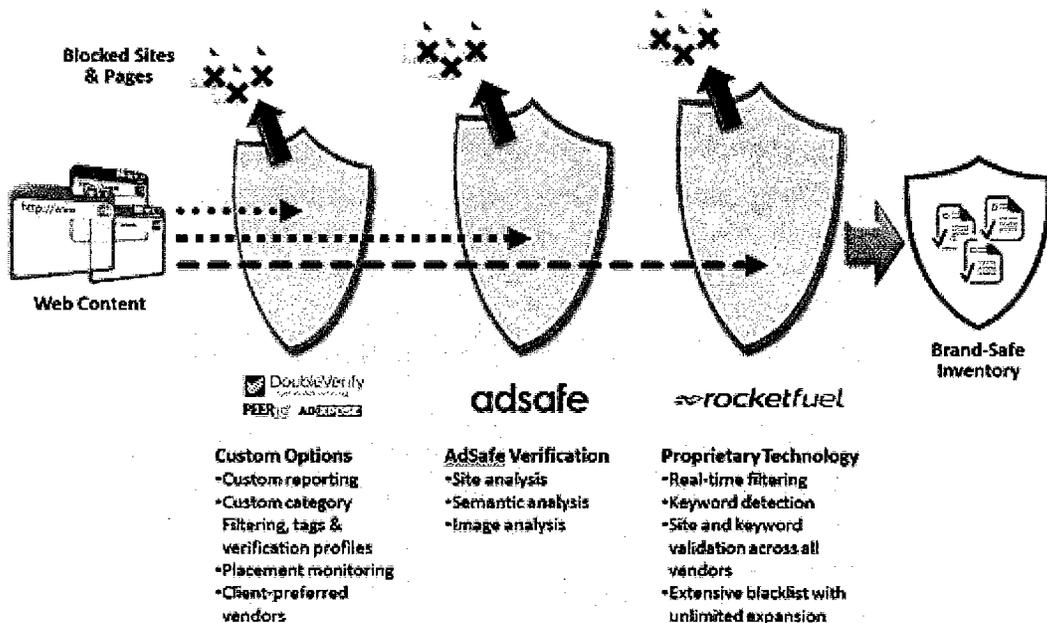
Rocket Fuel recognizes that the variety of available brand-protection solutions have different strengths, methods of categorizing content, and securing brand safety. None of them are perfect.

Protecting our clients' brands is of the utmost importance to us, so we take a radical, multi-layered approach to ensure that our clients are always protected.

Rocket Fuel takes a proactive approach, with three layers of defense that block bad sites and pages before a single ad is ever served on them. By building additional levels of safety and security right into our platform and processes, we ensure our technology delivers both ROI and peace of mind for brands.

Site Exclusions Block Unsafe Sites Forever

When sites are identified as unsafe, Rocket Fuel bans them from the network at the domain level. This prevents our system from ever bidding on impressions that contain a known unsafe domain on behalf of our advertisers.

A Real-time Approach to Real-world Issues

We have multiple controls in place to block undesirable content in real time, using a combination of third-party and proprietary technology. Our foundational solutions and technology continually identify sites that are unsafe. Our real-time keyword filtering blocks any site or page with potentially offending content before we bid on it.

Manual Validation Puts Experts in the Loop

At Rocket Fuel, we believe it is critical to combine both human and machine review. Our team double-checks third-party verification results creating a comprehensive keyword exclusion, content-category filters, and network-level site filters.

The AdSafe brand-safety and verification service provides domain-level analysis, page-level analysis, semantic analysis, and image analysis. Sites are given separate scores for a range of categories. AdSafe results are fed back into our system, and they're included in our Real-Time Brand-Safety Shield.

We are working with DoubleVerify, Peer39, Proximic, and Adxpose to create customized Rocket Fuel-specific category filtering, tags, and a verification profile. Sensitive categories of content where advertisers do not want their ads to serve are filtered out. The system also verifies and excludes pages with a high percentage of ad clutter. We are always happy to work with any provider our clients desire.

Proprietary Ad Server Keeps Us in Control and Agile

We have a complete ad-serving platform behind the exchanges, enabling us to add layers of defense beyond what the exchanges can offer. It also quickly implements new technology.

Dedicated In-house Brand-assurance Team

We have a dedicated brand-assurance officer whose sole focus is on monitoring all of the above processes and systems, making decisions on policy, offering guidance to clients, and continuously analyzing and improving Rocket Fuel's Brand-safety Shield.

From:	Jeffrey Chester ▬▬▬▬▬▬▬
Sent:	Friday, October 26, 2012 3:33 PM
To:	Jeff Wilson
Subject:	Yahoo criticizes Microsoft over DNT stance (my bold)

http://www.ypolicyblog.com/policyblog/category/privacy/

Yahoo! has been working with our partners in the Internet industry to come up with a standard that allows users to opt out of certain website analytics and ad targeting. In principle, we support "Do Not Track" (DNT). Unfortunately, because discussions have not yet resulted in a final standard for how to implement DNT, the current DNT signal can easily be abused. Recently, Microsoft unilaterally decided to turn on DNT in Internet Explorer 10 by default, rather than at users' direction. **In our view, this degrades the experience for the majority of users and makes it hard to deliver on our value proposition to them. It basically means that the DNT signal from IE10 doesn't express user intent.**

Ultimately, we believe that DNT must map to user intent — not to the intent of one browser creator, plug-in writer, or third-party software service. Therefore, although Yahoo! **will continue to offer Ad Interest Manager and other tools, we will not recognize IE10's default DNT signal on Yahoo! properties at this time.**

Yahoo! is committed to working with the World Wide Web Consortium (W3C) to reach a DNT standard that both satisfies user expectations and provides the best Internet experience possible. We will closely evaluate our support for DNT as the industry makes progress in reaching a meaningful, transparent standard to promote choice, reduce signal abuse, and deliver great personalized experiences for our users

In Support of a Personalized User Experience

Friday, October 26th, 2012
excerpt

From:	Jeffrey Chester ▓▓▓▓▓▓▓▓▓▓▓▓
Sent:	Friday, October 26, 2012 11:57 AM
To:	Weinman, Yael; Kestenbaum, Janis; Mithal, Maneesha; Engle, Mary Koelbel; Olsen, Christopher
Cc:	Ed Mierzwinski; sgrant; Beth Givens
Subject:	see Bluekai data blue book?
Attachments:	bluekai-little-blue-book.pdf

Jeffrey Chester
Center for Digital Democracy
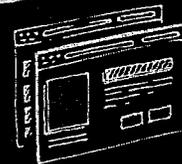1621 Connecticut Ave, NW, Suite 550
Washington, DC 20009
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202-986-2220

bluekai
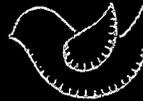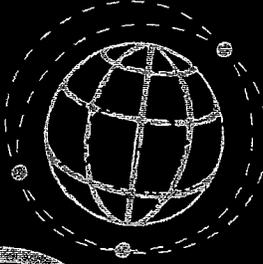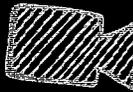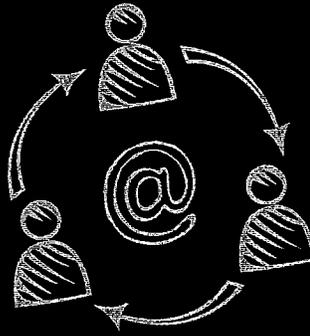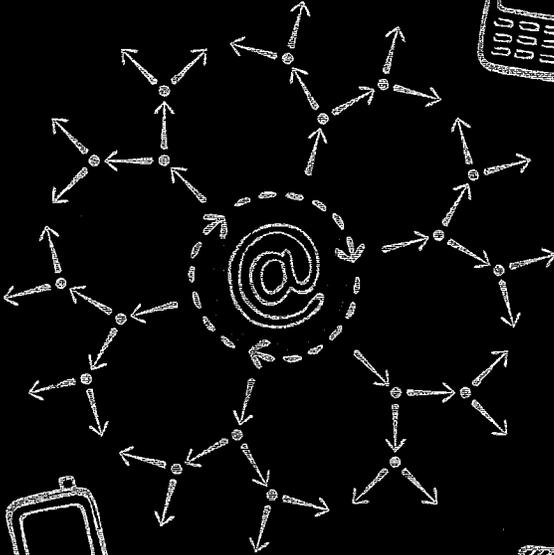
Little
Blue Book
A Buyer's Guide

bluekai
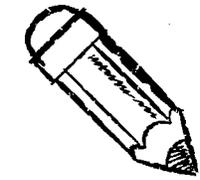
Let us help compile high performing and customized segments to activate your media buys – we make life easier and help you drive performance!
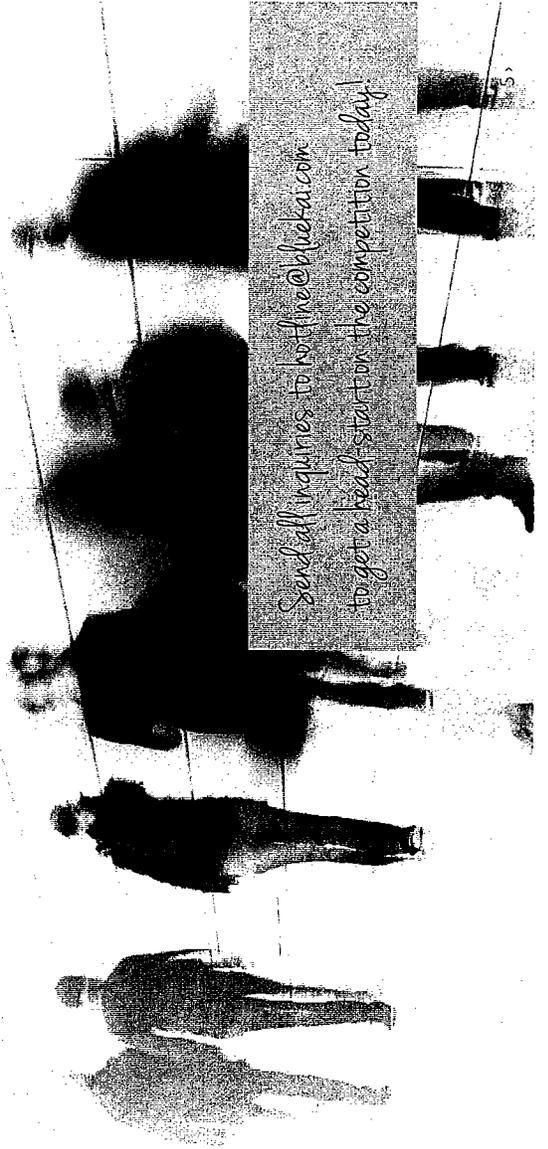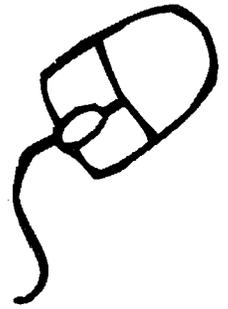
BlueKai is proud to announce the latest addition to our impressive line-up of client facing services: The BlueKai Data Planning Desk. Now operational on both coasts, the Desk is available to service all incoming RFPs from our valued clients – with turnaround times of under 48 hours. Together, we'll work to identify the data that best activates your clients' goals. For all upcoming media campaigns, remember to incorporate BlueKai's industry-leading data.

- Send us your RFPs and we'll respond quickly with a proposed audience plan
- Share any media plan & we'll assist in estimating impression totals
- Place our pixel on any page to analyze incoming traffic & discover the precise aggregate profile of any site visitors, then use these findings to target additional similar targets.

Send all inquiries to kvline@bluekai.com to get a jump start on the competition today!

Activate

Welcome to BlueKai's Data Planning Desk

Enhance Your RFP Responses with Audience Targeting Data.
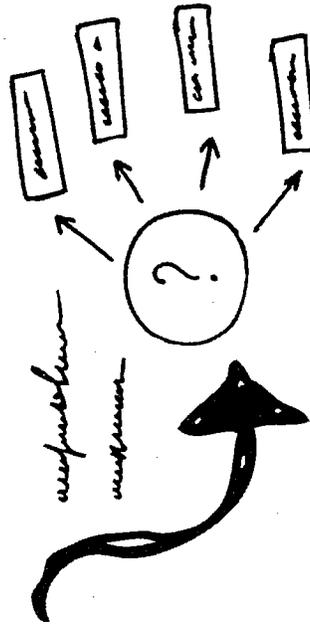
AdAdvisor®

a Neustar® service

Neustar: A Buyer's Guide

Neustar Data 101

AdAdvisor, a Neustar service, is a suite of data-driven audience targeting solutions that start with verified, scalable offline data to provide portable, cross-platform online targeting. AdAdvisor enables precise targeting by unlocking thousands of behaviors, attributes and lifestyles in addition to zip code, age, and gender and linking them to an AdAdvisor Element. Using AdAdvisor data, you can target prospects most predisposed to a brand, product or service. AdAdvisor's data comes from reliable offline data about nearly every US household, based on hundreds of proprietary sources. AdAdvisor does not track online browsing behavior, and is built on anonymous, privacy-friendly consumer profiles.

Description of Data Types

AdAdvisor provides access to 159 popular Audience Groups within the BlueKai marketplace, and to over 13,000 audience attributes for client-customized targeting. Each attribute allows you to target a portion of the US population that indexes highly for a particular behavior, characteristic, opinion, or brand preference. For instance, "Automotive – Vehicle Make – Chrysler" identifies households that are most likely to own a Chrysler.

Collection Methodology

AdAdvisor data is collected by verifying a user's real, offline household identity. We then associate that verified identify against Neustar's ElementOne segmentation model. We receive over 2 billion records per month from authoritative offline sources. These offline sources include market research data, retail purchase behaviors, demographic providers, and national panel data. Through a proprietary verification process, this information is aggregated and standardized within our ElementOne® Analytics Platform. The result is a highly accurate segmentation that reveals this user's consumer behaviors, propensities, and demographics.
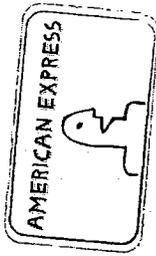
AMERICAN EXPRESS

Use Our Data For

Top 5 use cases for AdAdvisor data:

1. **Brand and Product-level Propensity Data** – e.g. American Express cardholders, Xbox users, Dove soap buyers

2. **Competitive Conquesting** – e.g. help Delta reach United Airlines frequent flier program members

3. **Brand Awareness** – identify target consumers before they are in-market

4. **Large-scale campaigns** – reliably reach tens of millions of uniques who fit your campaign goals

5. **Life Stages** – households with young children, consumers who do lots of home renovation, recent college graduates, seniors, etc.

AdAdvisor data also helps you reach people who behavioral targeting (BT) can't easily reach – for instance, consumers of products which are generally purchased offline.

AddThis

Collection Methodology

AddThis uses first-party, proprietary data from its social infrastructure platform, which is served on more than 14M sites more than 24B times a month. The data is collected anonymously and used to model audiences by layering social, site, and search graphs using multi-graph technology. The international data is collected both in English as well as native language and localized translation.

Use Our Data For

With the largest social data footprint on the Internet – AddThis has the most robust social and sharing data in the marketplace for brands and influence. AddThis audiences are best used for by advertisers looking to attract new prospects and visitors to their sites. AddThis audiences allow for levels of precision similar to retargeting because they are modeled off of current users, but with additional – and still efficient – scale. This data is used for every vertical (Auto, Retail, CPG, Travel, Financial Services), season (Holiday, Back to School, Mothers' day, etc) and type of buy (Social, Direct Response, Branding). Finally, AddThis has the largest world-wide audience base for global or international campaigns.
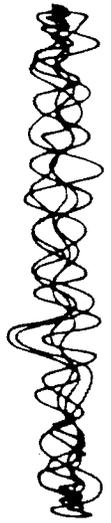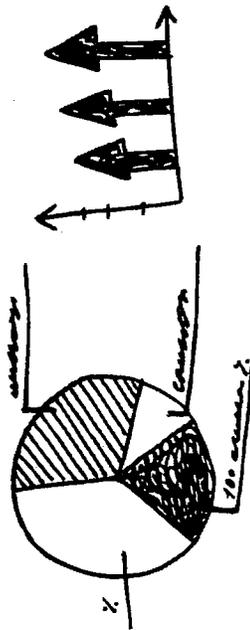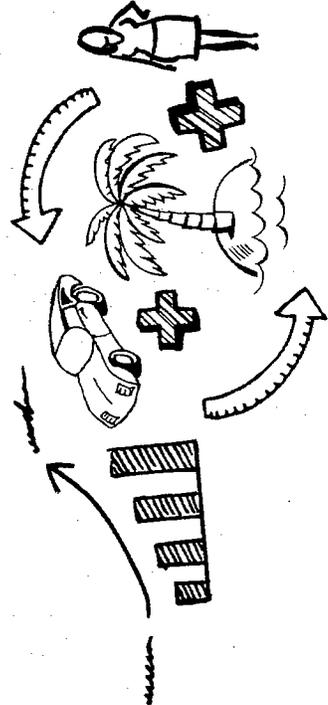
AddThis: A Buyer's Guide

AddThis Data 101

AddThis creates 700+ audience segments from proprietary, first-party data on 1.3B uniques across 14M domains, as well as custom audience models based on advertiser pixel and conversion data. Segments and models go beyond retargeting to find and understand brand prospects based on intent, behavioral and social connections in real time. AddThis is a global data company with 1.1B monthly uniques from international countries (250+M monthly US uniques).

Description of Data Types

AddThis has 700+ intent-based segments, interest segments and includes social data segments. These high performance segments have the greatest reach and scale in the industry. AddThis pinpoints in-market prospects that are the most likely to convert and are optimized and scaled using social and behavioral data. AddThis also models all the search, social and metadata with a full data science team. All data types are available to target international audiences in almost all countries.

Alliant

## Alliant: A Buyer's Guide

Alliant Data 101

Alliant creates predictive segmentation solutions for multi-channel marketers. The company's core assets include one of the industry's largest sources of transactional data, sophisticated analytics, and a deep understanding of marketing strategy. Alliant Online Audiences™ delivers a powerful segmentation platform for online display advertisers seeking brand reach and conversion performance.

Description of Data Types

Alliant Online Audiences includes consumer purchasing histories and powerful purchasing measures, allowing marketers to identify large audiences with targeted interest and loyalty profiles. All data is sourced offline from direct-to-consumer marketers who use promotional offers to sell merchandise, subscriptions, continuity products and memberships.

Purchase Interest Categories include:

- Health & Beauty
- Fitness & Well-being,
- Home & Garden
- Cooking & Gourmet
- Entertainment
- Books & Magazines
- Finance
- Family & Home
- Travel
- Products for Children, Women & Men
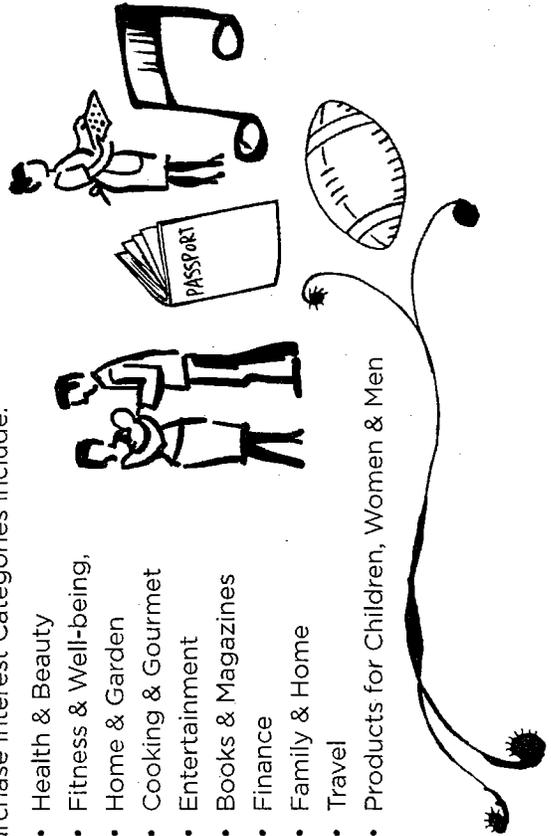
Transaction and Demographic Profiles:

- Financially in Charge
- Emerging Consumers
- Multibuyer Behaviors
- Recency
- New Movers
- Gender
- ProfitSelect™ response score

Collection Methodology

Alliant's data-driven solutions are powered by proprietary cooperative databases. Alliant combines multiple data feeds to create a unified, proprietary view of each consumers interests and performance. Alliant's data resources include transaction-level behavioral customer data on more than 140 million consumers, updated monthly by leading marketing brands. The purchase affinities and marketing behaviors are not inferred or modeled. They are based on direct transactions. A proprietary payment score is available for qualifying prospects for higher LTV or to be used as a wealth indicator.

Use Our Data For

Alliant Online Audiences allow marketers to target segments using any combination of purchase history, marketing behavior and monetary measures. It is a unique, fresh data set that combines direct marketing science with digital velocity.

Brand Advertisers can combine the AOA segments to target audiences by interest, demographic and likely pricepoints to craft responsive segments that precisely meet campaign goals.

Conversion Marketers can access AOA's affinity information and powerful direct response performance metrics to build response and generate conversions with highly targeted offers and price points.

bizo

Bizo: A Buyer's Guide

Bizo Data 101

Bizo gives marketers instant access to the people who sign the checks at work, and have the most to spend on life: business professionals. Fueled by proprietary demographic data, the Bizo Marketing Platform precisely targets more than 100 million professionals around the world.

Description of Data Types

Bizo business demographic data includes company size, industry, seniority and job function on 80 percent of the U.S. business population.
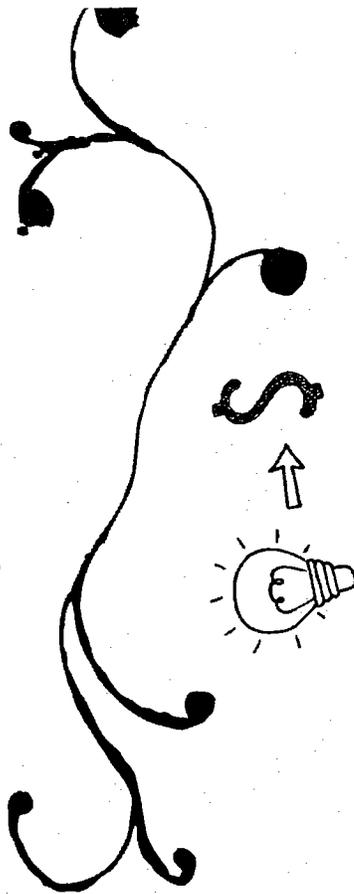
Collection Methodology

Bizo gathers and organizes vast amounts of non-personally identifiable information (non-PII) bizographic information. Bizo data is collected from the following sources: a) Registration Data, b) Vertical Publishers, c) Proprietary IP conversion, d) Off-line databases, and e) email data. Data is refreshed constantly as cookies change due to browsing patterns of business professionals. If Bizo hasn't seen a refreshed cookie from a business professional in six months, it is removed from the data segments.
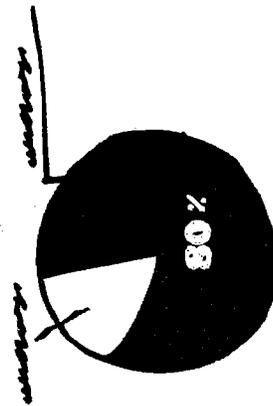
Use Our Data For

Both B2B and B2C brand marketers or lead gen wizards that are looking to engage the highly educated, high net-worth consumer audiences that business professionals represent, Bizo can grow brand awareness and drive qualified leads. The Direct Marketing Association (DMA) had the goal of attracting more marketers to its annual conference. Bizo's display campaign precisely targeted Marketing Professionals and Executives/CSuite across the U.S. The Bizo campaign supported or directly drove attendee leads and/or registrations.

BlueKai: A Buyer's Guide

BlueKai Data 101

BlueKai Intent™ data offers unparalleled data depth and breadth for branding and direct marketing initiatives, across seven key in-market verticals, and over 30,000 targeting attributes. BlueKai users who are bucketed into "in-market" categories are qualified consumers who intend to buy a particular product or service in the near term. BlueKai qualifies these consumers through specific actions which indicate intent to buy on top tier ecommerce, financial, retail, online travel agency sites. Sample actions include interactions with a search function (either via search widget, or entering in a keyword), product comparison, loan calculators, etc.
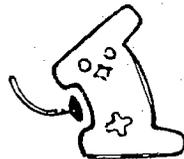
Description of Data Types

In-Market Auto Data – Users who have demonstrated intent through make/model searches, car configurations and dealership quote requests on online automotive sites . 93% of BlueKai's In-Market Auto's users come from comScore top 10 Automotive sites.

In-Market Travel Data – Users who have searched for flights, hotels and car rentals on top online travel sites in the last 7 days. 94% of BlueKai's In-Market travel users come from comScore top 10 travel sites like Kayak.com.

In-Market Education Data – Users who have demonstrated intent to pursue education and vocational training, typically at post-secondary institutions. Examples of intent in include searches on particular schools, majors, and financial aid products.

In-Market Financial Data – Users who have performed actions such as search queries, using financial calculators, and comparing credit card offers, mortgage rates, insurance products and retirement plans. 80%
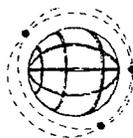
of BlueKai's In-Market Finance data comes from comScore top 50 Financial sites.

In-Market Retail Data – Users who have performed product comparisons, auction behavior, or SKU level searches on top online retail sites. Verticals include Clothing, Shoes & Accessories, Consumer electronics, Consumer packaged goods, Health & Beauty, Home & Garden, Entertainment, Video Games and Automotive Parts & Accessories.

In-Market Services Data – Users who have demonstrated intent to purchase local goods and services such as apartments, real estate, restaurants, mechanics, or retail stores in a particular geographic locations.

In-Market CPG Data – Users who have demonstrated intent to purchase consumer packaged goods through searches, product comparisons, and online auctions. Sample verticals include pet supplies, household supplies, baby care products, and health and beauty supplies.

Collection Methodology

BlueKai aggregate and classifies intent data from 80% of the Top 20 comScore sites in seven key vertical markets. This data is organized and qualified by a team of Classification Taxonomists, to ensure that all users who are tagged as "in-market" have indeed taken actions online to declare themselves as such.

Use Our Data For

Leverage BlueKai data for lower-funnel campaigns for targeting precision at scale. BlueKai In-Market Auto data has been seen to enhance campaign performance by 30x versus other intender auto data sources, and BlueKai "In-Market" data across verticals has powered campaigns to see an average of 200-300% lift in performance.

◆ **datalogix**®

Datalogix: A Buyer's Guide

Datalogix Data 101

Datalogix audiences are built from observed consumer behaviors and transactions. We create data-sets from multiple purchase transactions and observed behaviors harvested from tens-of-millions US households across many categories. Datalogix consumer behavioral data is created from actual consumer transactional data, directly from consumer purchases that are made in-store, online and via catalogs. By utilizing offline and online purchase behaviors, Datalogix has the most comprehensive and accurate set of transactional and descriptive data available from any provider of online targeting data.
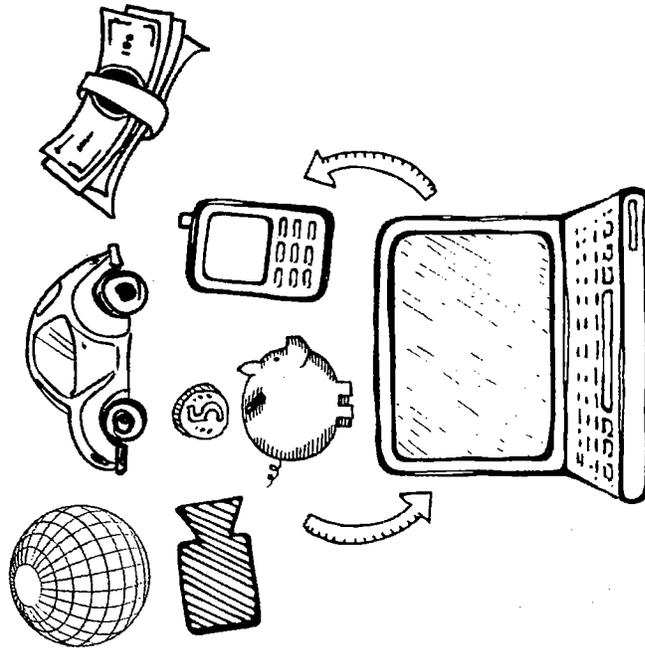
Description of Data Types

Datalogix captures data and creates audiences across multiple categories. This data is available in both syndicated, pre-built audiences or as custom audiences built to meet an advertiser's exact targeting needs. This data is available in the following categories:

Transactional:

- **DLX Retail** – SKU level purchase data obtained from over 1,400 multi-channel retailers

- **DLX CPG** – Brand level data from top grocery, drug and mass-merchandiser chains

- **DLX Auto** – Powered by Polk, this is automotive data derived from auto registrations and dealer purchases

- **DLX TV** – Powered by TRA, this is television viewing behaviors observed across millions of households obtained by cable and satellite providers
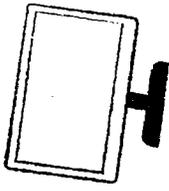
Offline:

- **DLX Demographics** – Multi-source verified demographics

- **DLX Finance** – Know financial behaviors and estimated financial attributes from leading offline providers

- **DLX Lifestyles** – Built from a blend of DLX data including frequent purchases, interests, and demographic & psychographic attributes

- **Geographic** – Address based geographic data, available at all commonly used targeting, postal and census levels
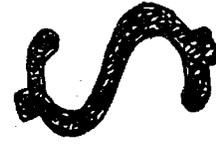
Advertiser CRM:

- **DLX OnRamp** – Custom audiences created directly from an advertisers own customer file

- **DLX OnRamp Audience Extension** – Precision modeling to identify audiences based on advertisers own customers

datalogix™ Continued...

Collection Methodology

100% of Datalogix audiences are derived from offline audience resources and are matched to anonymous cookies. Some of our data sources are as follows:

- SKU level purchase data from more than 1,400 retailers
- Brand level purchase data from leading, national grocery, drug and mass chains
- Automotive ownership and predictive purchase data from Polk, the leading provider of automotive marketing intelligence to auto manufacturers and their agencies
- Television viewing behaviors from a sample of over 4.2MM US households
- Demographics and financial data from leading offline providers on nearly every US household.
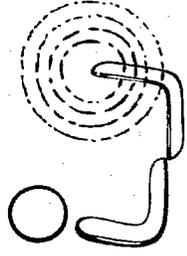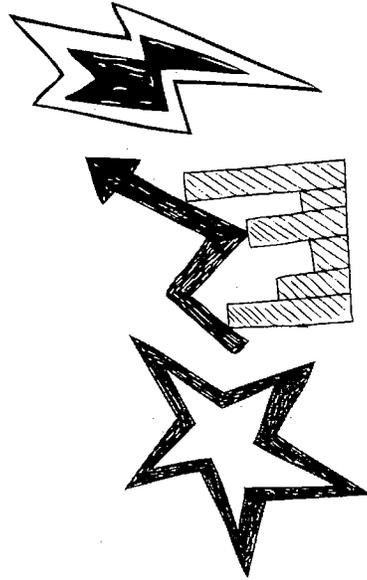
Use Our Data For

Datalogix is the best resource for online campaigns that drive sales via an offline channel.

Datalogix is provides the best audiences for:

- Consumer packaged goods brands
- Auto brands
- Products sold through major retail channels
- Campaigns for advertisers with their own customer data
- Campaigns targeting precise audience profiles

Experian: A Buyer's Guide

Experian Data 101

Experian® is a global leader in providing information, analytical tools and marketing services to organizations and consumers to help manage the risk and reward of commercial and financial decisions. Using our comprehensive understanding of individuals, markets and economies, we help organizations find, develop and manage customer relationships to make their businesses more profitable.
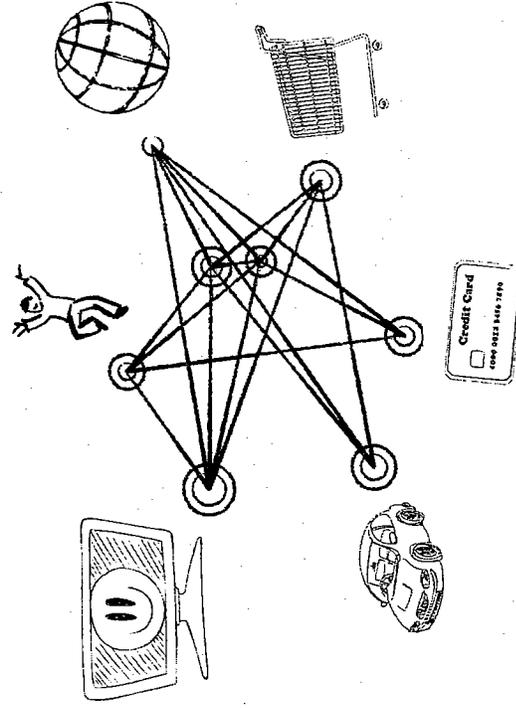
Experian's audience segments are powered by our industry-leading compiled consumer database. The ConsumerView℠ database uses state-of-the-art technology, unique build methodology, and vast data sources with online linkages to deliver a superior database that addresses the sophisticated needs of today's multichannel marketer.

Description of Data Types

It all starts with data. From demographics to behavioral and psychographic information, we draw on a massive base of knowledge we've accumulated during five decades in business.

Experian maintains a wealth of information about consumers and how they make buying decisions. ConsumerView provides the most accurate, comprehensive information on more than 299 million consumers and 116 million households. In fact, ConsumerView is independently ranked #1 in quality and #1 in coverage in comparison

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:Experian℠
Marketing Services
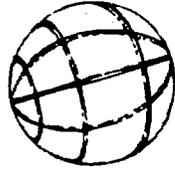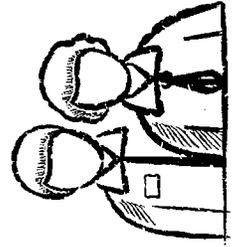
to other offline data compilers. Experian's extensive data resources are used to create syndicated, pre-built ConsumerView audience segments available in the following categories:

Demographic – This data provides valuable insight into the consumer population, including demographic information such as age, gender, income, occupation, and education.

Mosaic® – Mosaic® USA is our most popular segmentation tool that provides a 360-degree view of consumers' choices, preferences and habits. The Mosaic® system classifies all U.S. households and neighborhoods into 71 unique segments. This groundbreaking classification system paints a rich picture of U.S. consumers and their sociodemographics, lifestyles, behaviors and culture, providing marketers with the most accurate and comprehensive view of their customers, prospects and markets.

TrueTouch℠ – Experian's TrueTouch segmentation system offers 11 Touch-points to define the motivational messages that appeal to various audiences. Understanding Touch-points makes it possible for advertisers to align offers with the values and attitudes of the consumers they wish to reach, using language proven to resonate.

Property and Mortgage – For years, Experian has been a leader in compiling mortgage and property data from deed transaction records and tax assessor file records. As a complement to the known data, we have created property and realty models. The models utilize our existing data variables to predict such factors as the estimated current home value.

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Experian℠ Continued...
Marketing Services
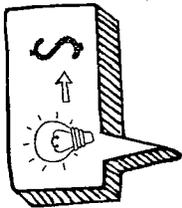
Collection Methodology

ConsumerView is developed from a wide array of sources, including self-reported information, aggregated panel data, websites that have permission to share information about visitors, public records and historical retail purchases that are collected offline and then brought online through propriety online data partnerships. Experian employs a rigorous process that includes the application of proprietary models, data from thousands of sources and proven algorithms to create its online audience segments. When used separately or combined, these segments deliver a more complete and accurate 360-degree view of consumers.

As a leader in the direct-marketing industry, Experian implements stringent value-based practices that govern the acquisition, compilation and sale of its consumer data to ensure compliance with legal guidelines. These tactics include, careful screening of data sources, ongoing internal audits and appropriate consumer notice and choice.
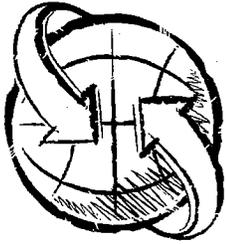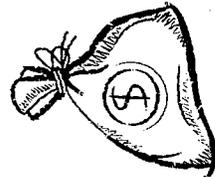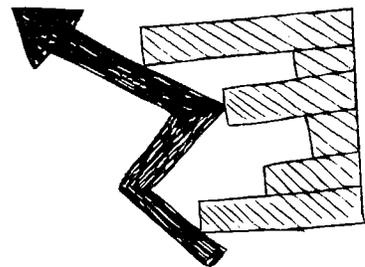
Use Our Data For

The ConsumerView audience segments use state-of-the-art technology, unique build methodology, and vast data sources to deliver superior audiences that address the sophisticated needs of today's multichannel marketer.

ConsumerView enables targeting that goes beyond simple demographic or contextual targeting. With ConsumerView audience segments, advertisers get both audience quality and reach because we help improve advertising effectiveness by reliably providing audiences that exceed millions of consumers. ConsumerView segments work best when combined to create customized audiences based upon demographic and lifestyle characteristics.
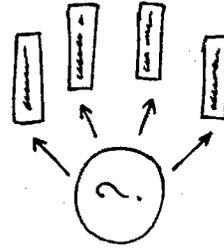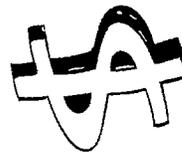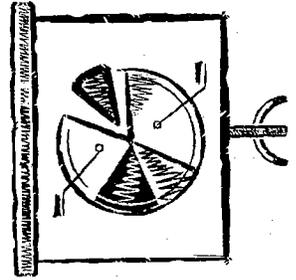
Forbes

Forbes: A Buyer's Guide

Forbes Data 101

Serving as the world's definitive source for business and finance news since 1917, Forbes and it's Premium Data Platform offer unparalleled access to a highly affluent and connected audience of insiders, innovators, and influencers. Advertisers look to Forbes for exclusive access to the business community and the rest of the world's elite with custom built, highly specified segments and exclusive targeting solutions.
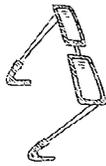
Description of Data Types

Forbes Premium Data is arranged by channel and by section in correspondence to Forbes.com. Channels include Business, Lifestyle, Technology, Investing, Thought Leaders, and Entrepreneurs. Each channel contains a array of more specific sections covering topics as diverse as Sports & Leisure, Travel, Autos, Personal Finance, Intelligent Investing, Mobile, CEO Network, and Style & Design.
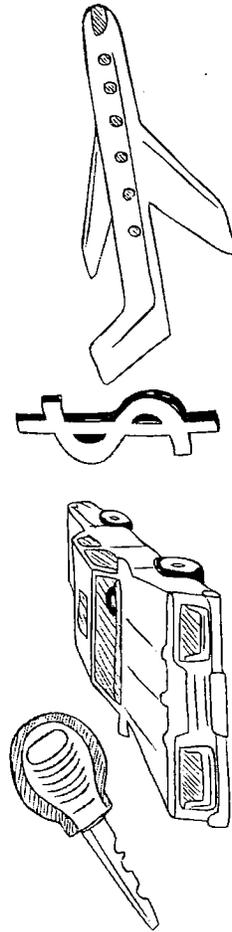
Collection Methodology

Using carefully verified, behavioral targeted data on the Forbes Premium Network, advertisers can pick and choose from over 80 unique Channels and Sections to create custom, highly optimized segments. This first-party data can reach audiences broad or niche.

Use Our Data For

Forbes Premium Data works best when segments are mixed and matched to create custom audiences of business and finance professionals and affluent consumers. Please visit **www.brandsideplatform.com** for more information and to view all of Forbes' Premium Data segments or contact **data@forbes.com** for general inquiries.
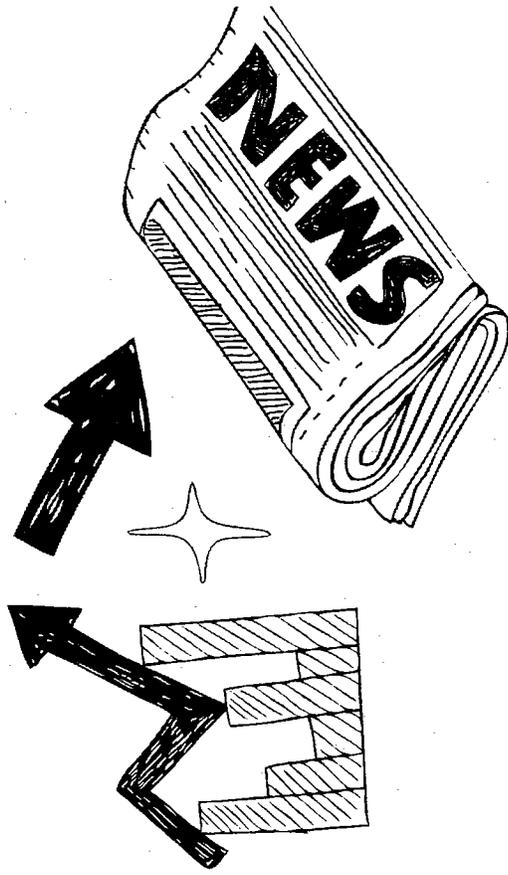
i360: A Buyer's Guide

i360 Data 101

The i360 national data clearinghouse supports the campaign and education activities of the pro-free-market public affairs, political and corporate communities. i360 maintains a fully integrated and continually updated database that includes more than 187 million active voters and 230 million U.S. consumers with hundreds of data points on every individual.

Through the integration of these data resources, extensive survey response work and advanced predictive models, i360 brings an unprecedented wealth of rich, current data on political affiliation, economic and social issue alignment, and behavioral demographics to online advertising.

Description of Data Types

The i360 Online Segments are custom-tailored for the political and advocacy communities. Segments include:

- **Registration & Partisanship** – Registered, Unregistered and Newly Registered Voters; Primary Voters; Republican, Democrat, Independent, and Swing Voters

- **Propensity or Likelihood to Vote** – High, Mid and Low

- **Issues** – Political and Charitable Donors; Social Conservative and Liberal; Fiscal Conservative and Liberal; Pro 2nd Amendment Voters

- **Personal Demographics** – Gender; Age; Income and Wealth; Home Ownership; Children in the Home; Marital Status; Investment Voters; Sports and Gambling Interests

Collection Methodology

Our business is built on maintaining a rich, constantly updated database of voter information from states and counties across the country. From there, we layer in hundreds of demographic and psychographic consumer data points from leading data providers, census data, precinct level election returns, and millions of pieces of survey response data. In all, i360 processes more than 4 billion individual records a year.

Our staff of predictive modelers works with industry leading software companies to build predictive models around partisanship, vote propensity and issue alignment, answering unknowns where hard data points are not available. The models are continuously updated based on new inputs using an ensemble model approach that averages the predictions produced by a number of techniques including Decision Trees, Neural Nets, Dmine Regressions and others.

Use Our Data For

Our data is the most comprehensive, accurate offering in the pro-free-market public affairs, political and corporate communities. It is used by political and advocacy organizations to target and reach voters and prospective voters with content and creative that speaks to their alignment and issue affiliation. Political segments are generally combined with lifestyle, issue, and demographic segments to serve meaningful content to responsive audiences.

IXI™
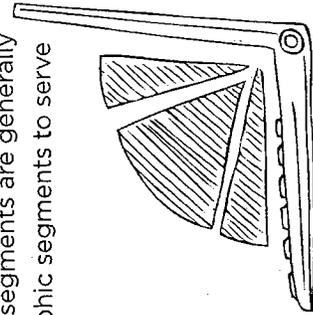
IXI: A Buyer's Guide

IXI Data 101

IXI Services, a division of Equifax, offers digital targeting solutions that enable marketers to better deliver the right message to the desired target audience based on visitors' likely financial capacity and interests. A leader in delivering marketing solutions based on anonymous, aggregated wealth and asset data, IXI Services specializes in consumer segmentation according to a wide array of financial metrics, including investment behaviors, spending levels, and other financial characteristics. IXI also offers industry specific-targeting segments that combine purchase propensity and economic capacity in auto, insurance, retail, telco, wireless, cable, travel, and other industry verticals.

Description of Data Types

IXI offers a wide range of targeting options including:

- **Demo: Economic Cohorts** – Robust "demographic" segments that combine HHI, life-stage, age, spending capacity and similar aggregated credit/affluence data in order to group users into targetable packages

- **HHI: Income360** – Estimated income from salary/wages and income derived from investments.

- **Auto** – segments that identify audiences of automobile preferences based on segmentation profiles as well as auto purchase and finance behaviors from the aggregated data accessible to Equifax
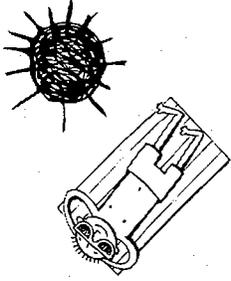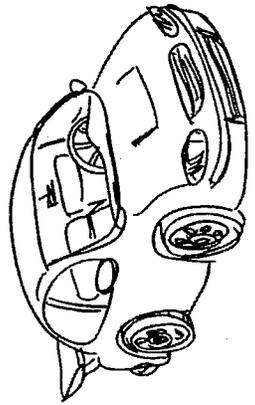
- **Travel** – segments that identify audiences by their travel preferences and behaviors based on segmentation profiles and aggregated customer data, as well as large-scale surveying that is applied to a statistically significant sample

- **Retail** – segments that identify audiences by their retail purchase preferences and behaviors based on segmentation profiles and large-scale surveying that is applied to a statistically significant sample

- **Video, Voice and Data** – segments that identify audiences by their wireless, wireline, cable, satellite and data preferences and behaviors based on segmentation profiles and aggregated customer data, as well as large-scale surveying that is applied to a statistically significant sample.

- **FICO** – ranges of scores from Fair Isaac that are directly based on FICO scores aggregated at the ZIP+4 level, based on credit record information.

- **Mortgage** – segments that identify audiences by their mortgage needs and profile behavior based on information accessible to Equifax and aggregated at the ZIP+4 level.

- **Insurance** – segments that identify audiences by their insurance needs and profile behavior based on information accessible to Equifax and aggregated at the ZIP+4 level.

- **Ability to Pay** – Estimated ability to pay their financial obligations capacity, in 4 tiers.

- **Discretionary Spending** – Estimated annual household spending capacity, after accounting for the fixed expenses of life.

- **Wealth and Deposits** – Estimates of consumers' household-level total asset wealth and deposit wealth. Built from IXI's directly measured financial assets database collected from over 95 of the nation's leading financial institutions.

IXI™ Continued...
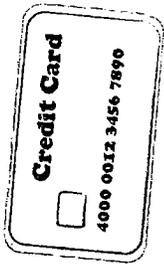
- **Credit Card** – segments that identify audiences by their credit card needs and profile behavior based on information accessible to Equifax and aggregated at the ZIP+4 level.
- **Retail Banking** – segments that identify audiences of Retail banking behavior built from IXI's directly measured financial assets database collected from over 95 of the nation's leading financial institutions.
- **Investments** – segments of various investment profiles and behaviors that are built from IXI's directly measured financial assets database collected from over 95 of the nation's leading financial institutions

Collection Methodology

IXI Services collects anonymous U.S. consumer asset data received from more than 95 financial services firms on a bi-yearly basis. The data we gather represent almost half of all U.S. invested assets. In addition we receive credit data directly from Equifax, FICO and survey data from top media insight companies monthly.

IXI's data is collected offline and then brought online through a complex infrastructure of partnerships and online data enablers that are able to link IXI data to the BlueKai cookies with the highest degree of integrity.
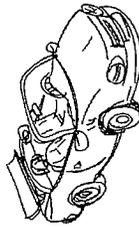
Use Our Data for

Example 1: Luxury Auto

High-end luxury auto brands looking for quality auto data, leverage IXI to provide an audience segment that favors luxury cars (domestic or European segments) AND the spending capacity to purchase. Favorable direct response and brand campaign performance is derived by ensuring auto interest is combined with spending capacity.
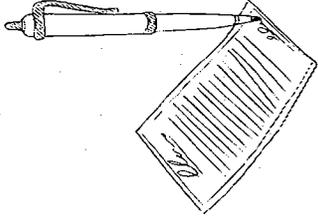
Example 2: In-Market for Auto Lease

Derived from Equifax credit files, auto firms looking to reach consumers with a lease set to expire with the next 6 months tap IXI's "In-Market for Auto Lease" segment. A truly unique product set that should be added to auto intent campaigns.

Example 3: Auto Insurance

Insurance carriers who would like to improve application to new policy ratios and/or customer profitability often lean on IXI's "Aggregated FICO" tiers (HH credit files are aggregated into national tiers to avoid PII, while still providing an accurate credit picture). A popular example is suppressing >700+ credit scores in order to improve lead funnel quality.

Example 4: Luxury Travelers

High-end travel brands looking to reach the right audience leverage IXI to provide an audience segment that favors luxury travelers AND the spending capacity to purchase. Favorable direct response and brand campaign performance is derived by ensuring travel interest is combined with spending capacity.

Example 5: Family Wireless Plan Subscribers

Wireless brands who wish to target an audience likely to be interested in a family wireless plan utilize IXI's data to reach users with the correct demographic composition, spending capacity and propensity. Truly captures the 360 view of the likely consumer.
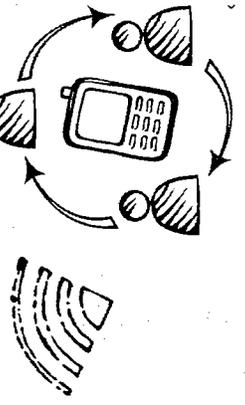
◈ LOTAME®

Lotame: A Buyer's Guide

Lotame Data 101

Lotame's 3rd party SMART Data comes from our extensive network of publisher partners. The data consists of self-declared and demonstrated behavioral data from unique publisher partners, yielding accurate and scalable Demographic, Behavioral Interest, and Social Influencer audience segments. Lotame Smart Data bundles 100% declared and demonstrated – NOT panel-based – data into over 180 audience segments across all major verticals (Auto, Travel, Finance, Retail, CPG).

Description of Data Types

- **Demographic Data** – 100% Self-declared by a user on an online profile or registration that is matched with offline sources to validate the demographic information provided.

- **Behavioral Interest Data** – This data is either self-declared or demonstrated by a user based on their behavior on a site. Examples include, dating or social profiles where a user declares certain interests. More often, it's the behaviors the user demonstrates online that shows their interest in a particular topic. Namely, what the user clicked on, searched for, read, watched, blogged about, posted a comment about, rated, and any other action a user could complete on a page.

- **Social Influencer Action Data** – Lotame's core niche offering, particularly for brand-focused advertisers. These are users that frequently complete social actions that others online can see, such as rating content, creating groups, posting messages, or commenting on content. These "socialites" facilitate the movement of content to others on the web and are crucial to reach for brand awareness, purchase intent, likelihood to recommend, and more.
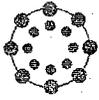
Collection Methodology

Lotame's data is primarily collected from our extensive group of publisher partners. Partners place our proprietary Behavioral Collection Pixels (BCP's) on every page of their site, allowing us to collect individual demographic, declared interest, action, search, purchase intent, and other data points. Our BCPs enable us to collect more than 2 billion data points each day while organizing them into 900 audience categories of human behaviors, refreshing nearly every second as each behavior is updated with each page view.

We have data from user's online and offline registrations, online and offline surveys, and demonstrated behaviors (where we will collect a data point on "Sports" if a user posts a comment on a Sports Forum, uploads a photo about Sports, reads an article about Sports, etc.)

Use Our Data For

Our 180 prepackaged Audience segments are designed to extensively cover most of the major verticals. Please refer to your Audience List for our full coverage, but the strongest verticals include:

- CPG
- Automotive
- Travel
- Finance
- Gamers (online and offline)
- Advocacy
- Entertainment (Movies, TV)
- Fashion
- Green Living
- Technology

The ideal use-case is for top-of-the-funnel, brand advertisers looking to reach large audiences and generate awareness, intent, likelihood to recommend/purchase, and view. Lotame's data has also worked well in performance-based campaigns in the major verticals above.

POLK
Automotive Intelligence

Polk: A Buyer's Guide

Polk Data 101

Polk is the premier provider of automotive information and marketing solutions. We collect and interpret data, and provide extensive business expertise to help automotive marketers understand their market position, identify trends, build brand loyalty, conquest new business and gain a competitive advantage.

Description of Data Types

A high-level overview of the categories available and how these categories are defined (i.e. "vehicle lifestyle" is defined as users who exhibit certain vehicle characteristics such as DIY, auto service buyers, vehicle age, and price point)

Polk auto audience data is comprised of several segment categories, which can be used alone or in combination:

- **In-Market** – Likely to be in the market for a particular type of vehicle (by brand, body style, new or used)

- **Owner targeting** – Likely to own a particular type of vehicle (by brand, body style, new or used)

- **Vehicle Price** – How much a user is likely to spend on their next vehicle

- **Vehicle Age** – Likely age of currently owned vehicle

- **Vehicle Lifestyle** – Combination of vehicle, demographic and lifestyle characteristics such as Family Hauler or Green Auto Buyer

- **Aftermarket** – Likely do-it-yourselfers (auto parts buyers) or auto service buyers; can be combined with likely length of vehicle ownership

- **Motorcycle/Motor Sports** – Likely owners of motorcycles and other motor sports vehicles

- **Seasonal Segments** – Hot prospects for seasonal marketing programs such as Year-end Buyers or Summer Sales Event Buyers

Collection Methodology

Polk audience segments rely on multi-sourced, U.S. consumer household information that draws from geographic, demographic and area-level vehicle characteristics. The data are used to build a suite of predictive models that allow marketers to select a target audience based on households' likelihood of owning a specific type of vehicle, being in the market for a vehicle and/or spending within a certain budget range for their next vehicle. The models are validated using actual vehicle registration data to prove their performance based on the buying behaviors being predicted.

Use Our Data For

For in-market campaigns, we recommend using our In-Market and/or Owner Targeting segments, which can be customized for campaign objectives such as owner retention or conquesting. For branding campaigns, our Owner Targeting and/or Vehicle Lifestyle segments are usually appropriate. For assistance selecting or customizing your Polk automotive campaign audience, contact Mike Smith at 248-728-7564 or mike_smith@polk.com.

TransUnion®

TransUnion: A Buyer's Guide

TransUnion Data 101

TransUnion combines data, advanced analytics and industry-focused experience to help institutions make more informed decisions at every stage of the consumer lifecycle. Through this powerful combination of information and insight, institutions can improve marketing, manage risk and strengthen relationships with existing customers. In the small business space, TransUnion has expanded its solutions to digital marketing including the ability to identify, segment and market to small business contacts online.

Description of Data Types

TransUnion can help institutions identify individuals online by appending small business owner characteristics to their Internet profiles (cookies). Several small business segment values are available including:

- **Geography** – Attribute segments represented by small business owners in specific states.

- **Industry Verticals** – Attribute segments represented by industry verticals for specific small business marketing campaigns. Examples include:
  - » Business/Professional Services
  - » Healthcare
  - » Personal Services
  - » SOHO
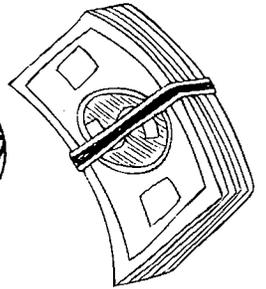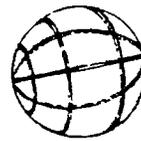
- **Sales Revenue** – Examples include:
  - » $0 - $250,000
  - » $500,001 - $1,000,000
  - » $3,000,001 - $10,000,000

- **Total # of Employees** – Examples include:
  - » < 2
  - » 5 - 9
  - » 50 - 100

- **Title** – Examples include:
  - » Owner
  - » Executive
  - » Professional / Medical

- **Year Company Established** – Examples include:
  - » < 2 years
  - » 2 through 5 years
  - » 5 through 10 years
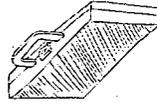
Collection Methodology

TransUnion small business solutions combine proprietary core data assets and external small business data via innovative matching logic. The small business data include more than 27 million small businesses sourced from over 70 databases, which are all validated to ensure accuracy and freshness of the data.

Use Our Data For

The TransUnion Small Business Digital Marketing Solution can help institutions refine their digital footprint with Internet cookie-based small business advertising:

- Improve small business acquisitions through relevant, timely offers in the digital marketplace

- Define specific small business targets with deeper granularity and reach

- Target small business candidates for tailored invitation-to-apply (ITA) offers

- Cross-sell services to expand small business relationships

TruSignal™

Estimated Household Income – An estimate of household income, based upon many profile data factors, including demographics, geography, past purchase behavior, public records, financial information, and census information.

Underbanked Consumers – Prospects who have similar profile characteristics of consumers who maintain nontraditional banking relationships. Applicable to money transfer services, short term loans, and prepaid debit products.

Political Affiliation – Prospects who have similar profile characteristics of consumers who are known Democrats, Republicans or Independents.

Political Donors – Prospects who have similar profile characteristics of consumers who previously donated money to either the Republican or Democratic parties.

Estimated Financial Health – An anonymous estimate of consumers' ability to satisfy their existing financial obligations. These segments were designed for targeting campaigns where financial quality is an important consideration, such as with mortgages, credit cards, insurance, investment services, telecommunications services and auto loans or purchases.

TruSignal: A Buyer's Guide

TruSignal Data 101

TruSignal gives you a more precise way to target consumers who look like your existing best customers at scale. Our custom and syndicated solutions extend across 1:1 digital marketing channels and advertising platforms – including display and pre-roll video. Based on patented data mining and predictive analytics technology, a TruSignal audience combines data from 40 different sources of verified, offline profile data. We help brand advertisers, direct marketers and their agencies "cut through the noise" of online audience targeting data and deliver highly precise and highly scalable prospecting and branding campaigns.

Description of Data Types

Auto Insurance – Prospects who have similar profile characteristics of consumers who applied for and purchased auto insurance through online channels. Applicable to insurance carriers, brokers or aggregators offering auto insurance products.

Term Life Insurance – Prospects who have similar profile characteristics of consumers who applied for and purchased term life insurance through online channels. Applicable to insurance carriers, brokers and aggregators offering term life products.

Higher Education – Prospects who have similar profile characteristics of consumers who applied for and enrolled in national higher education programs.

Mortgage Refinance – Prospects who have similar profile characteristics of consumers who applied for and refinanced their mortgage through online channels. Gives higher weighting to larger loan values, but still within normal Fannie Mae guidelines.

TruSignal™ Continued...

Collection Methodology

TruSignal aggregates a wide variety of offline consumer profile data from over 40 third party data sources including: financial databases, property records, census, demographics, past purchases, household databases, hobbies, and interests. These data sets are the "raw materials" used to define each TruAudience formula.

In an offline process, TruSignal compares samples of target customer data against our thousands of third party data attributes using proven regression modeling techniques. Our proprietary process discovers over 100 unique predictive factors that define a high value "lookalike" consumer, giving you all of the power and precision of many datasets distilled into a single, custom audience.
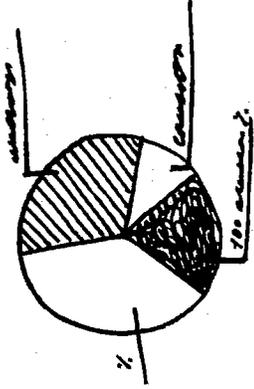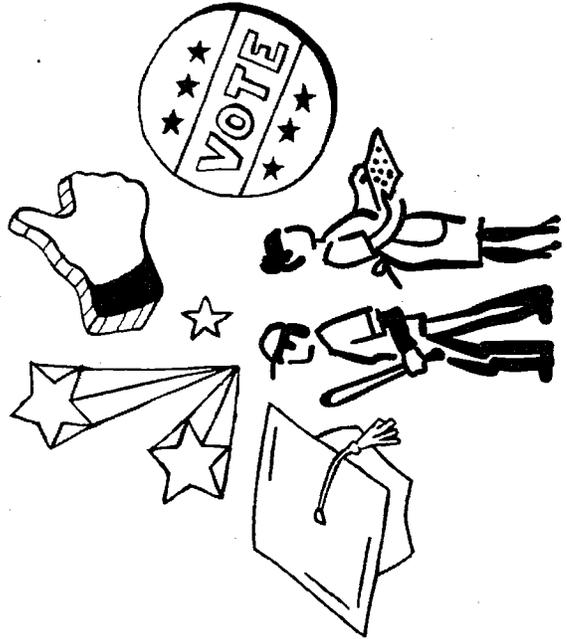
Use Our Data For

TruAudience segments work well for upper funnel prospecting and branding campaigns, where the objective is reaching the "right" consumers earlier in the consideration cycle. We specialize in targeting your most desirable new prospects by combining many different kinds of consumer profile data. TruSignal does not use any in-market or intender data, which is most appropriate for bottom funnel conversion campaigns.

TruSignal can even build custom audiences for specific campaigns, based on a historical record sample. The custom development process ensures that we are using all of the right data to profile the audience and it allows us to on-board unique datasets that are specific to a given campaign objective. Historical performance data can be extracted from CRM platforms, campaign landing page pixels or from within an existing DMP.
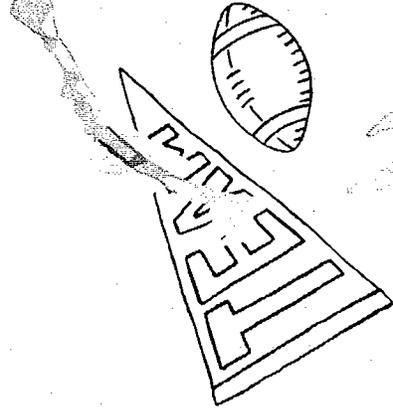
V12: A Buyer's Guide

Brief Description of Data

V12 Group turns offline consumers into targetable audiences. We map offline demographic, lifestyle, and purchase data into privacy compliant online audience segments, reaching the most relevant online audience for any consumer-focused campaign. Our unique blend of the most accurate and up-to-date offline data, combined with our wide reach to over 50 million US consumers has increased ROAS for both brand and direct response campaigns alike.

Description of Data Types

V12 Group offers over 300 audience segments to target across nine categories including: Automotive, Buyers, Entertainment, Finance, Sports & Fitness, Lifestyle & Pursuits, Travel, Demographics, and a proprietary set of personality data called PYCO.

- **Unique & Custom Audiences** – Target any one of V12 Group's 300+ segments or combine several segments to create a custom composite segment to best fit your targeting needs. V12 Group also offers hard-to-find audience data, including heritage, voter information, and political party affiliation to name a few.

- **Automotive Data** – Target Auto consumers by Make, Model, Class, Budget, Purchase Type, In-Market Predictor, and After-Market Repair Profile.

- **PYCO** – Based on the Myer's-Briggs Personality Type Indicator, PYCO has developed a proprietary Algorithm that uses a consumer's name, mailing address, and 320 different data points to accurately assign a personality type to 85% of Adult US Consumers. Together PYCO and V12 Group offer the only source in the market to provide psychological, digital, demographic, and geographic information combined into 16 unique personality segments. PYCO Data is used to: Creative Ad Optimization, different messaging for different personality types, and more.

Collection Methodology

V12 Group's multi-channel consumer file is one of the largest consumer databases in the direct marketing industry. The database is an aggregated file built from more than 40 compiled and proprietary data sources which combines postal, email, phone and mobile data, as well as hundreds of selectors to improve targeting including: demographic, geographic, lifestyle, interests, and behavioral data.

- 208 million consumer records
- 110 million US households
- 68 million ePostal records
- 81 million email records
- 112 million phone records
- Over 260 specific data fields that can be used for targeting
- 1,000 census variables (ZIP & CRRT level)
- Regular updates for optimal delivery
- Multi-source file of response & compiled data
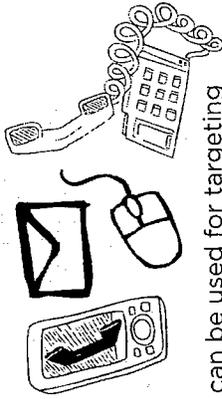
Use Our Data For

Advertisers have seen strong performance leveraging V12 Group's online audience segments across a variety of categories, including:

- Travel
- Finance
- Auto
- CPG
- Software
- Gaming
- Home Décor
- Entertainment
- Niche Lifestyle Audiences
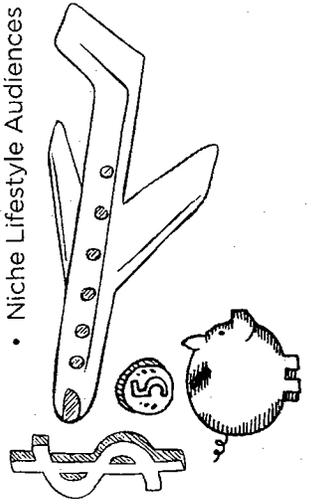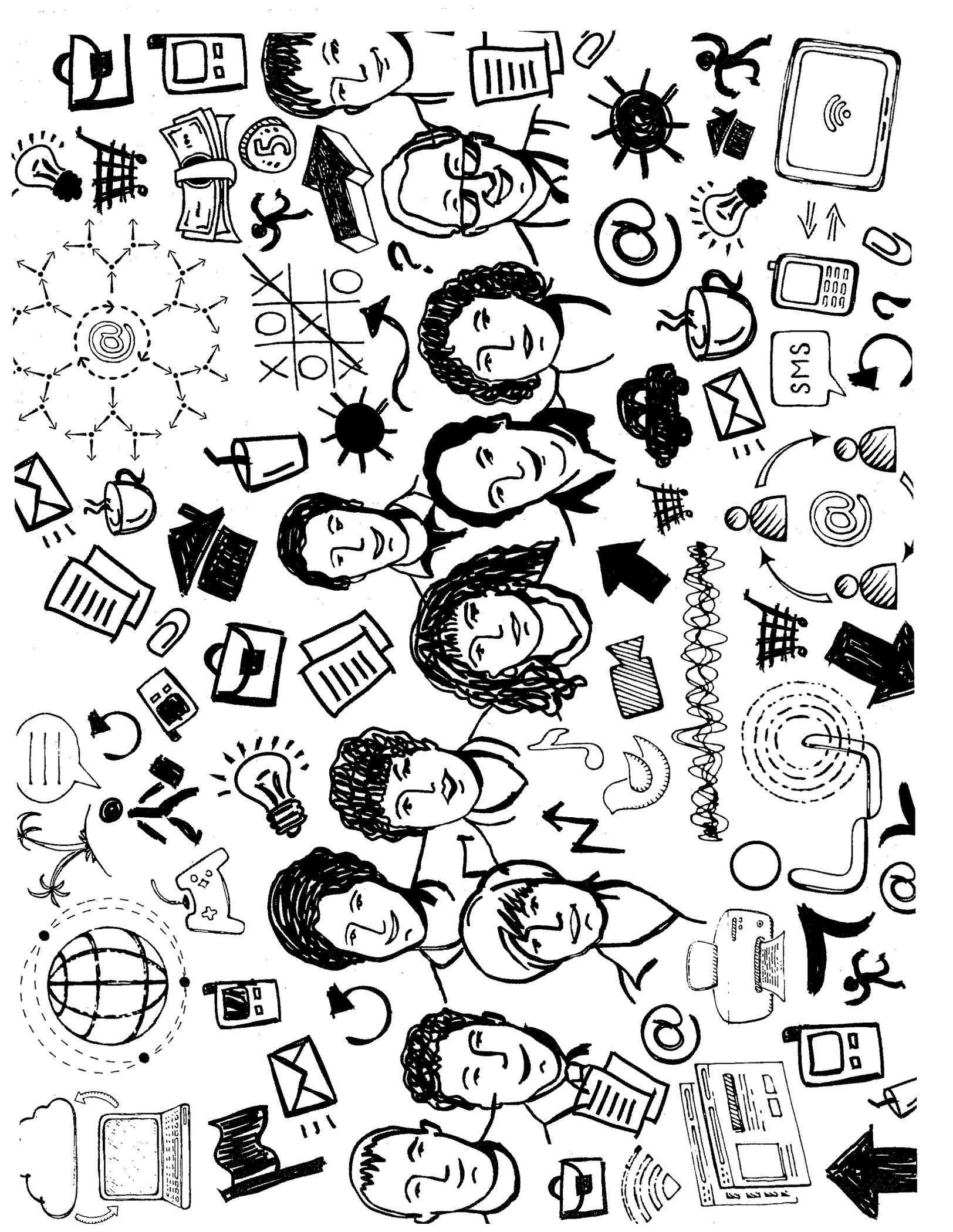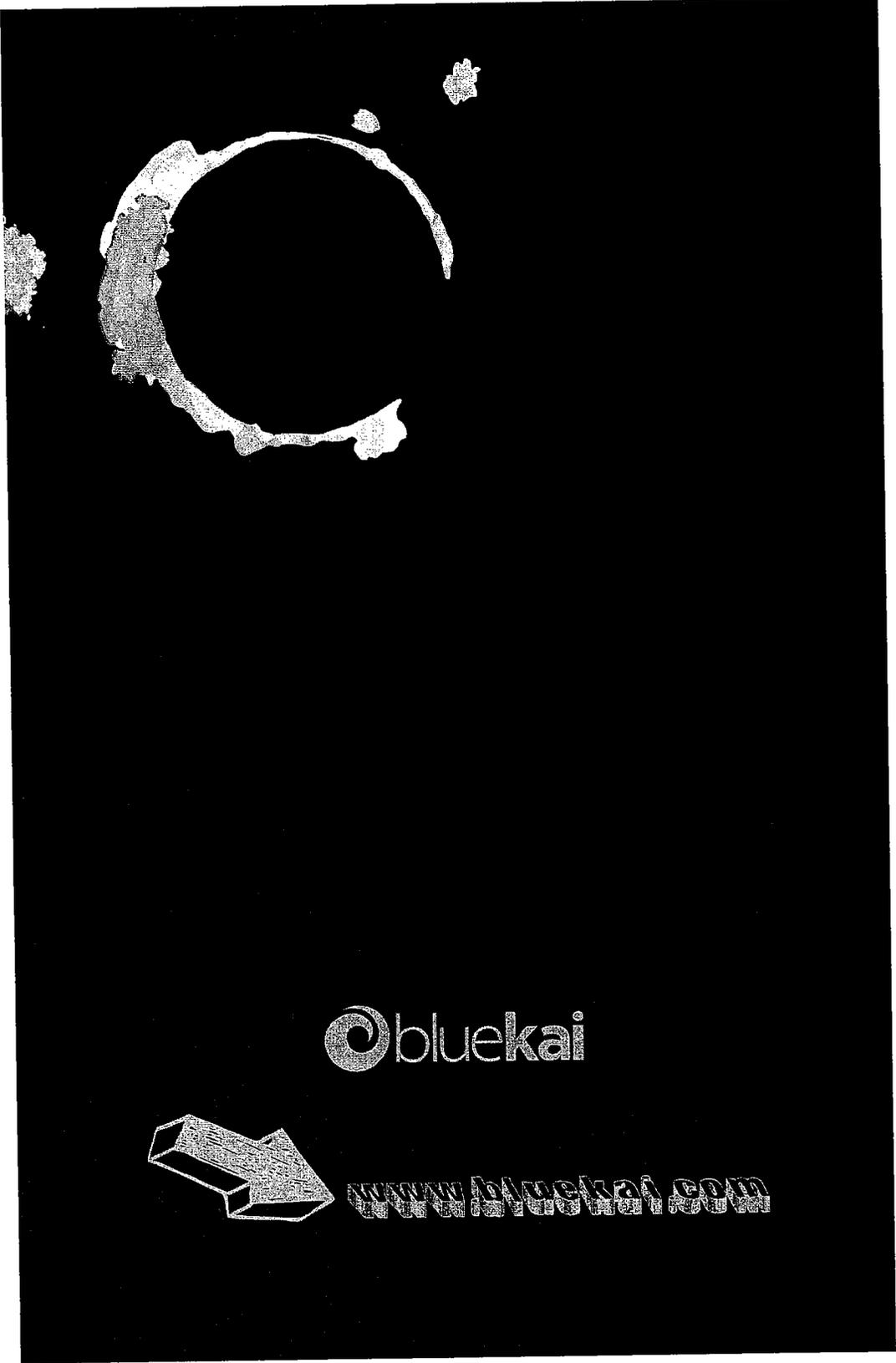
bluekai

www.bluekai.com

From:	Jeffrey Chester ██████████████████
Sent:	Thursday, October 25, 2012 11:56 AM
To:	Kestenbaum, Janis; Davis, Anna
Subject:	more brand safety

We understand the importance of protecting your brand by ensuring advertising does not appear on inappropriate websites. Our client-by-client Brand Safe content classification filters ensure your individual requirements are adhered to. For most of our clients' we use a Blacklist of websites advertising should not appear on. Using our unrivaled experience in this market, we have an enhanced Master Blacklist which includes thousands of undesirable websites together with some we deem to be too poor quality to carry our clients' advertising. We also present clients with Optional Sites, these websites carry content which, although not barred, is sensitive enough to warrant permission before inclusion in a campaign. At the start of every campaign we work with each client to create a supplementary Blacklist of websites by category or by individual domain, specific to the clients' requirements. Once a campaign launches we monitor it closely and make adjustments if necessary. For some clients it is more appropriate for us to create a Whitelist of websites, specific to the clients' targeting needs. In this case advertising will only appear on websites included on the Whitelist which are constantly reviewed for performance.

http://www.infectiousmedia.com/index.php?page=our-technology

From:	Jeffrey Chester
Sent:	Thursday, October 25, 2012 11:16 AM
To:	Kestenbaum, Janis; Davis, Anna; Zylberglait, Pablo; Engle, Mary Koelbel
Cc:	Laura Moy; Jordan Blumenthal; Jessica Wang; Joy Spencer
Subject:	see p23-24, brand safety
Attachments:	vCE-Charter-Study.pdf

This comScore study also discusses the brand safety issues and I think is useful.

Changing How the World Sees Digital Advertising

vCE™ CHARTER STUDY REVEALS HOW VALIDATED ADS ARE IMPACTING
THE FUTURE OF DIGITAL AND CROSS-MEDIA MEASUREMENT

MARCH 2012

LINDA ABRAHAM Co-Founder, CMO & EVP of Global Development

ANNE HUNTER SVP, Advertising Effectiveness

ANDREA VOLLMAN Marketing Director

comSCORE

Contents

Introduction

Across the globe, digital media has become an important component of every advertiser's marketing mix. According to the Interactive Advertising Bureau (IAB), display-related advertising spending in the United States (U.S.) reached $10 billion in 2010 and has grown at 20%+ rates since then, far exceeding the growth of traditional media. Just as we've seen tremendous growth in terms of the volume of digital advertising, the landscape itself has also experienced a massive evolution. From new ad formats and placement strategies to new delivery systems and ad technology, it has become challenging for players across the industry to stay up-to-speed.

Until now, digital advertising measurement has not kept pace with the complexity of these changes. The transactional focus has been on measurement of gross impressions delivered, as opposed to those that were actually seen by consumers in a particular target. As a result, marketers have been limited in their ability to understand how online advertising works, especially when compared to other media channels. This lack of understanding has resulted in reluctance by many marketers to fully embrace digital advertising. From publishers to ad networks and from marketers to agencies, key players in the space are calling for more transparency and greater accountability as it relates to online ad delivery.

Addressing this industry-wide call-to-action, the IAB, the American Association of Advertising Agencies (4As) and the Association of National Advertisers (ANA) – each representing a key constituent group in the advertising market – jointly launched an initiative called, *Making Measurement Make Sense* (3MS). Simply put, 3MS's goal is to improve, standardize and simplify digital media measurement. In order to reach this goal, 3MS has published guidelines and is conducting research to help address issues surrounding ad delivery, measurement and validation.

FOR FURTHER INFORMATION, PLEASE CONTACT:

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press@comscore.com

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Validated Campaign Measurement

In January 2012, comScore released a breakthrough innovation to the marketplace that addresses many of the guidelines outlined in the 3MS initiative as well as some additional industry issues relating specifically to ad delivery validation. This solution, validated Campaign Essentials™ (vCE™), provides an unduplicated accounting of impressions delivered across a variety of dimensions, helping to significantly improve the value of online advertising.

vCE validates whether or not impressions delivered as part of a campaign were:

- In-view (i.e. viewable by an actual consumer)
- Delivered in the right geography
- Seen in brand safe environments
- Absent of fraud

In addition, vCE evaluates the demographic and behavioral composition of the campaign audience, enabling the advertiser to assess the degree to which validated impressions reached the desired campaign targets.

Importantly, vCE gleans all this information via a single ad tag, thus enabling a comprehensive, but holistic, view of digital ad delivery that is unique to the marketplace. The use of a single ad tag is a critical component of this measurement approach as it evaluates all impressions consistently and applies validity conditions simultaneously. This eliminates all issues associated with duplicated measurement and offers a more accurate view of campaign delivery. Duplication and inconsistency typically arise when disparate data-collection sources are merged, which can dramatically impact the quality of the analyzed data.

The vCE Charter Study

This is the first study to bring twelve leading marketers together to holistically understand how online advertising is delivered.

To better understand issues associated with display ad delivery and validation, and to test-drive vCE, twelve leading marketers participated in a U.S.-based charter study, called the vCE Charter Study.

The eye-opening findings help to pave the way for a more accurate measure of campaign delivery that relies on validated impressions, rather than served impressions (or gross impressions), which are currently the established currency for online ad measurement. Validated impressions can also be used to report validated gross and target rating points (vGRP/vTRP).

Ideally, this research will help to promote the broad adoption of new standard measures that reflect the true delivery of a campaign (per the 3MS guidelines), and it will also help to generate greater visibility and transparency across the industry and across media. Throughout 2012, similar charter programs will be rolled out in other global markets, including Canada, Latin America, Asia and select European countries.

PARAMETERS AND METHODOLOGY
Study Participants:

Kellogg's   Ford

Sprint   kraft foods   Kimberly-Clark

Allstate   E*TRADE   DISCOVER

hTC   CHRYSLER

Time Period: December 2011
Total Campaigns: 18
Media Placements: 2,975
Site Domains: 380,898
Ad Impressions: 1.8 billion
Format: All ads were display, delivered via iframes.

Importantly, 100% of the vCE Charter Study ad impressions were delivered in iframes, including a majority of 'cross-domain' iframes. The definition of these iframes is discussed in the In-View section of this paper, but it is important to note that this is the first industry study to measure and report on in-view rates for ads delivered via all iframes, including those delivered via the notoriously difficult-to-measure cross-domain iframes.

For the purposes of this report, all findings are presented in aggregate, not by individual campaign, to protect the confidentiality of client data. Findings are reported by total campaign as well as by publisher-level, placement-level and/or creative-level.

It should also be noted that because vCE Charter Study participants included major branded advertisers, who inherently buy more premium inventory than the average online marketer, the study findings are not necessarily representative of the overall online advertising market. In fact, because these advertisers generally engage in high-end, premium campaigns, the findings may represent 'best-case scenarios,' rather than the norm.

KEY METRIC DEFINITIONS

In-view: In-view is defined as an ad impression with at least 50% of the ad's pixels in the user's viewport for one second or more. This definition is consistent with current working standards outlined as part of the 3MS initiative. The parameters for the definition of in-view can be easily changed to accommodate any change in industry standards.

Audience: Using the comScore panel of 2 million global consumers, comScore is uniquely qualified to report on audience delivery with person-level insights. This means the study was able to validate delivery to target audiences based on traditional demographics as well as more than 80 behavioral segments.

Geography: Geographic validation is measured by country on a global basis. Although vCE is available globally, with regional data available in some countries, for the purposes of the vCE Charter Study, all campaigns were validated based on delivery in the U.S.

Brand Safety: Ads delivered on sites deemed not appropriate for brand advertising due to objectionable content are considered to be in violation of brand safety. The definition of objectionable content is further discussed within the Brand Safety section of the paper.

Fraud: Fraud was measured by counting ad impressions served to non-human agents as per the IAB spiders and bots list as well as ads that were served to users via illegitimate methods or content. Although there are several other types of fraud detections, these two very basic types were included in the vCE Charter Study to establish a baseline.

The goal of the vCE Charter Study was to quantify the incidence of sub-optimal ad delivery across these key dimensions for the advertised brands, and in so doing, frame the relative importance of each for the industry. Although vCE offers the ability to optimize campaigns in-flight in order to eliminate waste and generate better advertising outcomes, this feature was not deployed for the purposes of the study, as it would detract from the study's objective of determining a baseline of delivery prior to in-flight optimization.

Executive Summary of Findings

1 In-View Rates are Eye-Opening

The study showed that 31% of ads were not in-view, meaning they never had an opportunity to be seen. There was also great variation across sites where the campaigns ran, with in-view rates ranging from 7% to 100% on a given site. This variance illustrates that even for major advertisers making premium buys, there is a lot of room for improvement.

2 Targeting Audiences Beyond Demos Can be Powerful

Generally, campaigns that had very basic demo targeting objectives performed well with regard to hitting those targets. For example, those with an objective of reaching people in a particular broad age range did so with 70% of their impressions. Predictably, as additional demographic variables were added to the targeting criteria (i.e. income + gender), accuracy rates of the ad delivery declined. However, the results also showed that, on average, 36% of all impressions in a campaign were delivered to audiences with behavioral profiles that were relevant to the brand (i.e. consumers with demonstrated interests in categories, such as food, auto or sports). One campaign had 67% of its impressions viewed by the target behavioral segment, demonstrating that targeting to people based on interests or behaviors holds strong potential.

3 The Content In Which An Ad Runs Can Make or Break a Brand

Of the campaigns analyzed, 72% had at least some impressions that were delivered adjacent to objectionable content. While this did not translate to a large number of impressions on an absolute basis (141,000 impressions across 980 domains), it is important to note that 92,000 people were exposed to these impressions. This demonstrates that even with the most premium of executions, brand safety should be an utmost concern for advertisers.

4 Fraud is the Elephant in the Digital Room

Fraud is an undeniably large and growing problem in digital advertising. The results showed that an average of 0.16% of impressions across all campaigns was delivered to non-human agents from the IAB spiders & bots list. Although this percentage might appear negligible, there are two important considerations to keep in mind. Only the most basic forms of inappropriate delivery were addressed in this study. When additional, more sophisticated types of fraud are considered, the problem will only get larger. Like brand safety, fraud should be an important concern for all advertisers.

5 Digital Ad Economics: The Good Guys Aren't Necessarily Winning

The study showed that there was little to no correlation between CPM and value being delivered to the advertiser. For example, ad placements with strong in-view rates are not getting higher CPMs than placements with low in-view rates. Similarly, ads that are doing well at delivering to a primary demographic target are not receiving more value than those that are not. In other words, neither ad visibility nor the demographic target delivery is currently reflected in the economics of digital advertising.

In-View

DEFINING IN-VIEW

One of the most fundamental aspects of advertising measurement, particularly as it relates to cross-media, is the need for a solid and consistent method of determining whether a consumer had an opportunity to see (OTS) an ad. In television, once an ad is delivered in a program, it plays, meaning that the consumer had an opportunity to see it. While the person might not have been in the room to see the ad, the industry accepts the notion that the opportunity was still there and therefore it gets counted as such. Alternatively, if the television is turned off, there isn't an opportunity for it to be seen.

The advertising industry has accepted OTS as a standard metric, which many rely on to build cross-media campaigns and to assess the effects of advertising across channels. This metric is particularly important based on the very simple fact that:

If an ad does not have an opportunity to be seen by a real user, then it cannot possibly deliver its intended effect.

When compared to other forms of media, digital advertising has unique characteristics relating to an ad's opportunity to be seen. To date, the standard has simply been to measure whether ads were served to a page. However, there are many reasons why a served digital ad might not result in someone having an opportunity to see it. For example, consumers often land on a particular page and then quickly scroll down to consume content before the banner ad at the top of the page had a chance to load. An alternative scenario is when a user remains at the top of the page, never scrolling to the bottom

where many ads have loaded. Given these scenarios, which inherently result in many ad impressions being delivered but not seen, the industry has begun to evaluate ways to accurately measure viewability and to improve in-view rates to avoid wasted ad spend. 3MS proposed a standard definition of in-view, which states that at least 50% of the pixels of the ads must be in-view for a minimum of 1 second.

Aside from adhering to the 3MS proposed working definition, viewability measurement must also account for all ad delivery formats in order for it to be accurate. There are three distinct ad delivery formats from which publishers can choose to deliver ads, and these are:

FORMAT I
Delivery of an ad directly on a publisher site:
In this instance, the publisher places a JavaScript ad tag on its page with the marketer's ad tag in the same domain as the site content.

FORMAT II
Same-domain ('friendly') iframes:
Many sites choose to use an iframe to deliver advertising on their site, as it can help to prevent any unwanted content associated with the ad from damaging the main site content. Same-domain iframes, also known as friendly iframes, typically refer to instances when a site allows the iframe to communicate directly with rest of the page, which in turn, facilitates the measurement of the iframe location when the page is rendered on the viewable screen. This helps to determine whether the ad is in-view and for how long.

FORMAT III
Cross-domain ('unfriendly') iframes:
If a site chooses not to allow the ad to communicate directly with the page, it reserves a place for it in an iframe, which

calls a third-party domain to serve the ad. This severed communication link presents a daunting challenge to the measurement of the iframe's position on the page, and, therefore, ad visibility.

The vCE technology is unique in the marketplace as it is the first and only that can see through cross-domain, or unfriendly, iframes, which means that vCE's in-view rate accounts for all ad delivery formats.

This is particularly important given that comScore research shows that 61% of iframed ads are delivered via these unfriendly iframes. To demonstrate the value of this patent-pending technology, 100% of the ads served in the vCE Charter Study were delivered via iframes.

IN-VIEW BY CAMPAIGN & SITE
Across all campaigns in the vCE Charter Study, the average in-view rate was 69% (See Figure 1). The in-view rates by campaign, however, showed significant variation – with a range of 55% to 93%. This indicates that, on average, 3 out of 10 ads were not seen and were therefore wasted.

Figure 1 Percentage of Ads In-View by Campaign

Campaign	In-View
1	93%
2	85%
3	84%
4	80%
5	76%
6	75%
7	74%
8	73%
9	71%
10	69%
11	68%
12	66%
13	65%
14	59%
15	58%
16	58%
17	57%
18	55%

A site-level view across campaigns revealed even more variation in in-view rates (See Figure 2). On one site, 100% of the ads were in-view. For this particular site, all ads were placed in the center of the homepage and scrolling was not required to reach the remainder of the content. For another site, only 7% of the delivered ads were in-view, meaning 93% of all ads served on that site never had the opportunity to be seen and were therefore completely wasted.

Since only one out of every 14 ads on the site had the opportunity to be seen, if a marketer paid a $1.00 CPM to deliver advertising on that site, the effective CPM would have been $14.00. While a site with a $1.00 CPM may seem like a bargain, when waste levels on the site are as high as 93%, it can effectively become one of the most expensive placements in a media plan.

Figure 2 Percentage of Ads In-View by Site

100%

69%

7%

MINIMUM   AVERAGE   MAXIMUM

TO BETTER UNDERSTAND IN-VIEW RATES, THE RESULTS WERE ANALYZED BY:
- **Placement** *(premium, standard, etc.)*
- **Relative Size of Site** *(overall and within category)*
- **Content Type** *(News sites, Sports sites, etc.)*
- **Ad Size** (300x250, 728x90, 160x600)
- **Position on the Page** *(above-the-fold versus below-the-fold)*

IN-VIEW BY PLACEMENT
Even within a given site, in-view rates can vary significantly by placement.

A traditional content site, for example, ran several vCE Charter Study campaigns. Across the various placement locations on this site, the in-view rate varied from 23% to 95%. The placements appeared to fall into three distinct levels of in-view (See Figure 3).

- The largest number of placements delivered more than 80% of the advertisements in-view—well above the vCE Charter Study average (69%). Such placements could be considered high-viewability inventory.

- Approximately one-third of the placements delivered advertisements between 66% to 75% in-view, which indicates they were on-par with the vCE Charter Study average.

- A small number of placements, however, dragged down the site's average, given their very low in-view rates. With the use of in-flight optimization (which was not deployed for the purposes of the vCE Charter Study), these sub-par in-view rates could have been identified early and removed from the delivery. In addition, these data suggest an opportunity for this publisher to reconfigure the page layout to ensure that more advertisements are viewable.

Figure 3 Percent of Ads Delivered In-View for Individual Placements Across a Traditional Content Site

IN-VIEW BY RELATIVE SIZE OF SITE

An important question relating to viewability is how in-view rates vary based on the size of a site. To begin to answer this question, a separate grouping of average in-view rates was created based on site size. Using comScore Media Metrix® rankings within specific content categories (i.e. Sports sites, News sites, Food sites, Health sites, etc.) as a proxy for site size, average in-view rates were calculated based on Top 50, Top 100, Top 500 and long-tail sites by category, and the findings were then analyzed. Within these content categories, in-view levels decreased as the site rankings decreased. In fact, the difference in in-view rates between Top 50 sites versus the long-tail sites was a full 16-percentage points (See Figure 4).

This finding suggests that large sites within a content category do a better job than smaller sites at ensuring the ads they deliver to consumers are actually viewable. Further analysis is needed to identify exactly why this is the case, but a few potential options may include the fact that the quality of the site and the content within a site is stronger on these more popular sites.

IN-VIEW BY CONTENT TYPE

In-view rates also showed variation by content type (See Figure 5). For example, Coupon sites delivered relatively strong in-view rates (89%), whereas Pet sites (27%) struggled, delivering slightly more than a quarter of ads in-view. This variation across categories might, in part, reflect the common layouts among sites in a similar genre.

Figure 4 Percentage of Ads Served In-View within a Given Site Category

77%	74%	70%	61%
TOP 50 SITES	TOP 100 SITES	TOP 500 SITES	LONG TAIL SITES (REMAINING 501+ SITES)

% OF ADS IN-VIEW

Figure 5 Percent of Ads Served In-View by Select Content Types

Content Type	%
COUPONS	89%
DIRECTORIES	81%
ENTERTAINMENT - RADIO	73%
ENTERTAINMENT - TV	72%
TECHNOLOGY - NEWS	70%
WEATHER	67%
TEENS	60%
POLITICS	59%
DEPARTMENT STORES	58%
PETS	27%

% OF ADS IN-VIEW

IN-VIEW BY AD SIZE

The most common ad size used in the vCE Charter Study was the Classic Leaderboard (728x90), followed by the Medium Rectangle (300x250), and then the Wide Skyscraper (160x600). The Classic Leaderboard delivered the strongest in-view rates (74%), but there was significant variance across all sites with a range of 7% to 93% using this size. The Medium Rectangle format (300x250) delivered 69% of its ads in-view, and the Wide Skyscraper (160x600) delivered the lowest portion of ads in-view (66%).

Although further research is required to better understand the driving factors for differing in-view rates across ad sizes, one potential cause is the relationship between ad sizes and their typical placement on a web page. For example, Wide Skyscraper ads run vertically along a web page, making it more difficult for 50% of its pixels to be in the user's viewport for at least one second.

Figure 6 Percent of Ads Delivered In-View by Ad Size

Ad Size	%
WIDE SKYSCRAPER (160X600)	66%
MEDIUM RECTANGLE (300X250)	69%
LEADERBOARD (728X90)	74%

comSCORE

IN-VIEW BY POSITION ON PAGE

When discussing viewability, there is a common misperception that ads delivered 'above-the-fold' are seen, while ads delivered 'below-the-fold' are not. While the quality of in-view rates can vary from 'above-the-fold' versus 'below the fold' ad delivery, the vCE Charter Study results help to dispel some of these myths. Surprisingly, the findings demonstrate that some ads delivered 'above-the-fold' were not seen because users quickly scrolled past them before the ad had a chance to load, and alternatively, many ads placed 'below-the-fold' delivered a high opportunity to be seen (See Figure 7).

The implications of these findings are far-reaching, and there are broad applications for both buyers and sellers of online media. Publishers, for example, should monetize all ads on their site that deliver an opportunity to be seen, regardless of where the ad is placed on the site. This might mean that inventory 'below-the-fold' can be priced as premium as long as the publisher can prove it was viewed. Alternatively, marketers can look for inventory that is currently identified as remnant, which still delivers attractive in-view rates. Much of this inventory resides in exchanges and can be better optimized by taking into account its placement-specific viewability potential.

Figure 7 Percentage of Ads In-View by Location on Page

IN-VIEW & COST

Finally, comScore explored the relationship between the cost of the ad and the in-view rate. Eight of the vCE Charter Study campaigns provided cost data for use in the analysis. Some campaigns were branding-oriented, while others were direct response. In total, 300 unique ad placements had accompanying CPM data.

The analysis showed there is virtually no correlation between the CPM paid for the ad and whether it was in-view (correlation coefficient = 0.19). This low correlation clearly demonstrates that sites with the ability to garner strong in-view rates are not being compensated fairly. Without solid in-view data, current pricing fails to

account for differentials in in-view rates. Understanding the actual delivery by both site and placement is critical for marketers seeking to value media based on its ability to reach a real user.

Publishers and marketers with detailed in-view data are better able to value the placements that provide true value and price them accordingly.

Figure 8 Correlation of In-View Rates & CPM

$R^2 = 0.0373$

CPM INDEX

% OF ADS IN-VIEW

comScore

Audience

DEFINING TARGET AUDIENCE

Marketers invest in digital with the goal of buying ads that are more successful than traditional media at reaching a desired audience. Unfortunately, the extent to which an ad reaches its target can vary greatly based on many factors. The comScore vCE Charter Study evaluated audience delivery in two separate, but important, ways:

Traditional Demographics
Delivery of ad impressions to traditional demographic targets, including age, gender, household income and the presence of children in the home.

Behavioral Segments
Delivery of ad impressions to behavioral segments based on observed online behaviors (i.e. food enthusiasts, sports fans, etc.).

Validating ad delivery based on traditional demographics is the most common approach. However, understanding how well an ad reached a relevant behavioral target is potentially more valuable, since it offers perspective on not just who the person is but on what they are interested in, especially as it relates to the advertised product.

To evaluate the accuracy of ad delivery, vCE Charter Study participants identified their target audiences for each campaign, which could include one or any combination of the traditional demographic attributes as well as behavioral segments. Behavioral segments are comprised of the heaviest consumers (top 50%) of topic-specific Web content (i.e. sports, food, cars, personal electronics or travel). vCE Charter Study participants identified a primary behavioral attribute from 80 different online behavioral profiles.

Figure 9 illustrates the most popular desired attributes across all campaigns in the vCE Charter Study. The majority of campaigns included age in their target set, which is not surprising given its wide use as a desired attribute across all forms of media. Interestingly, however, the ability to reach a behavioral attribute was the next most common approach, demonstrating the growing importance of some marketers' desire to reach people based on more than demographics. It should be noted that the use of behavioral campaign reporting is relatively unique to digital and certainly a compelling value proposition for marketers trying to connect more closely with consumers who exhibit interests that are aligned with and/or related to the advertised brand.

Figure 9 Percent of Charter Campaigns Using Desired Attribute(s)

94%	AGE
50%	BEHAVIORAL SEGMENT
44%	GENDER
6%	HOUSEHOLD INCOME
6%	PRESENCE OF CHILD

AUDIENCE TARGETING BY TRADITIONAL DEMOGRAPHICS

Across all vCE Charter Study campaigns, there was quite a bit of variance in their ability to reach the desired target audience. As one might imagine, the more complex the target (i.e. the more demographic targeting variables included in the target set), the more difficult it was for the campaign to deliver on its promise (See Figure 10).

Campaigns with a target audience that included one demographic variable (e.g. 25-54 years old) delivered impressions to the target an average of 70% of the time. In cases where there were two variables (e.g. women + 25-54 years old), the accuracy of targeting decreased to an average of 48%, and with three variables (e.g. women + 25-54 years old + with children under 18 in the home) the average was 11%.

Figure 10 Percent of Ads in Demographic Target Based on Number of Targeting Variables*

Demographic variables can include: age, gender, household income and/or number of children in the household. Due to sample size, a meaningful range could not be calculated for campaigns with 3 demographic variables.

AUDIENCE TARGETING BY BEHAVIORAL ATTRIBUTES

In addition to looking at the audiences in terms of their demographics, online behaviors of people who were exposed to the campaign were also measured. The campaigns were measured against their desired behavioral attribute at the campaign level. In some cases, specific cookie-based behavioral targeting was used in several placements in the campaign. In other cases, marketers wanted to reach their desired behavioral audience through traditional media placements, such as delivering an ad alongside content of interest to their audience. Across all campaigns, the average campaign reached its behavioral audience target 36% of the time, with a wide range from 23% to 67% (See Figure 11).

One obvious conclusion from this finding may be that online behavioral targeting has limitations as an accurate or effective means of reaching audiences online. However, if executed correctly, behavioral targeting can be a very powerful, efficient and effective means of delivering a brand message to a valuable audience.

One primary reason for these limitations includes the cookie-based nature of behavioral segmentation. For example, while a user may have visited a travel site that shared its information with data providers on the basis of the cookie for that browser/machine combination, there is no guarantee that when that cookie is observed later at some other site, that it represents the same user. Another reason relates to the freshness of the information. Someone may have visited a travel site six weeks ago, but they are no longer active in travel research. Finally, one visit alone may not be sufficient to identify a serious travel intender. As a result, one must be careful about the accuracy of the targets they purchase, which is precisely why audience validation and in-flight optimization should be a critical part of the campaign management process. If these campaigns were to have leveraged in-flight optimization (which they explicitly didn't for the purposes of the research), it is likely that these numbers would be dramatically higher.

Figure 11 Percent of Ads Delivered to the Primary Behavioral Attribute by Campaign

23%
LOW

36%
AVERAGE

67%
HIGH

It is also important to note that, in some campaigns, the behavioral attribute target actually did a much better job at delivering on-target impressions than the demographic group, suggesting that using demographics alone to evaluate the success of campaign delivery is not sufficient. For example, one campaign for a CPG-product that had a demographic target of women between the ages of 25-54 years old, only served 37% of impressions to that group. However 67% of the impressions went to people who were heavy users of food and cooking content online. With demographic-based evaluation alone, this campaign delivery would have appeared unsuccessful.

A separate analysis of an Automotive campaign in the vCE Charter Study helps to shed light on the value of behavioral campaign reporting and its ability to reveal a deeper portrait of the type of consumer exposed to the campaign. The analysis involved creating an index of visitation to online site categories for consumers exposed to the ad campaign compared to the average Internet population. The findings revealed that the exposed group over-indexed (158) on automotive content, meaning the audience reached by the campaign was 58% more likely than the average Internet user to be a significant consumer of online automotive content (See Figure 12). This is a positive indication that the campaign reached the right audience regardless of the demographic composition.

Another important finding was that the audience reached in this campaign also over-indexed significantly in categories relating to Financial Products (382) and Family and Parenting (266). This information can be used to develop creative messaging that speaks to the interests of the audience, such as showcasing a family vehicle or financing information in ads.

Again, it is important to note that for the purposes of the vCE Charter Study, these campaigns were not optimized in-flight, meaning that no corrective action was taken throughout the course of the campaign to improve the extent to which these ads were able to reach their target audience. With in-flight optimization, it is highly likely that all campaigns would have seen improved on-target delivery rates for both their demographic and behavioral targets.

Figure 12 Index of Online Behavioral Activity by Category for Consumers Exposed to an Automotive Campaign

INDEX

AUDIENCE TARGETING & COST

Using available CPM data (as outlined in the prior In-View section), the correlation between CPMs and the accuracy of demographic targeting (primary audience only) was analyzed as part of this research. The findings revealed a very small correlation (correlation coefficient = 0.18), suggesting that there is little or no relationship between the amount paid for an ad and its ability to reach the desired demographic target audience.

Before drawing macro conclusions about this finding, it is important to examine some of the potential reasons for this lack of correlation between these two variables. First, some marketers might simply not be building campaigns with the core objective of reaching a specific demographic, and instead they are buying media based on its ability to hit certain behavioral segments.

Another very real issue is the accuracy of cookie-based targeting data. As noted above, there are a myriad of companies that provide this data, and there is very large variation in the quality of the data. Unless cookie-based audiences are verified against a credible third-party source, it is possible that they are missing the mark. In the vCE Charter Study, demographically-cookie targeted ad placements reach their desired demographic 14% to 96% of the time. This indicates a wide variation on the quality of demographic cookie data.

Regardless of the cause, it is clear that, at present, the market is not rewarding ads that deliver to the intended audience compared to those that did not. This represents an opportunity for both advertisers and publishers, especially now that they have transparency into the accuracy of delivery and the ability to optimize in-flight to avoid waste.

Figure 13 Correlation of % of Ads Delivered to Primary Demographic Target & CPM

$R^2 = 0.0308$

INDEX OF CPM

% OF ADS DELIVERED TO THE PRIMARY DEMOGRAPHIC TARGET

Geography

DEFINING GEOGRAPHIC TARGET
When delivering ads on television, it's relatively easy to ensure they run in their desired geographic market, because broadcast markets have defined geographic borders. The Internet, on the other hand, is borderless and users can access specific content from anywhere in the world. As a result, controlling geographic distribution of advertising can be challenging. For marketers trying to maximize every dollar of their advertising budget, it is critical that their ads are delivered in the desired market where their products are actually sold. Accordingly, geographic validation was an important component of the vCE Charter Study.

GEOGRAPHIC TARGETING: OVERALL & BY CAMPAIGN
All campaigns in the vCE Charter Study had a geographic target of the U.S., and in total, about 4% of impressions were delivered outside of the U.S. Of impressions delivered outside of the target, nearly half were served in Canada, and the remainder spread across Europe, The Caribbean, Asia-Pacific and Latin America. This finding suggests that a good portion of the wasted impressions were delivered to people living in countries whose native language is something other than English.

Figure 14 Percent of Ads Delivered to Geographic Market Among All Impressions Delivered Outside of North America

When examining the results on a campaign-by-campaign basis, it is interesting to note the large range of impressions delivered outside of the target geography. While one campaign performed flawlessly, another wasted about 15% of its impressions (See Figure 15). Given that the Internet provides a wealth of geo-location information, and given the campaigns' broad target of 'inside the U.S.', this large range is somewhat surprising.

In such cases, the inability for an ad to be delivered in its intended geography is often not a result of poor targeting capabilities, but rather due to error in complex ad buying and selling processes. Delivery of ads outside a given geographic target often occurs for two primary reasons:

The first reason is simple

communication error. In some cases, the site serving the ad is not aware of the intended geographic target. This occurs when the requirement does not appear on the insertion order (IO), which authorizes the purchase of impressions from the site and determines the characteristics of the ads to be served. Such misfires can be easily remedied by ensuring geographic requirements are a standard part of IO contract templates.

The second reason is due to human

error. To target an ad to a given geography, the requirement must be programmed in the ad server that is delivering the ad. Occasionally this step is missed by the publisher, or in rare cases, the wrong geography is inadvertently selected.

Fortunately, there are easy ways to combat these issues. As long as geography is specified in the IO, performance can be optimized in-flight in two different ways. The first is through real-time alerting, which notifies sites when ads are being served outside the desired geographic region so that corrective action can be taken. The second option is to use an ad blocking technology, which can be implemented to prevent ads from being served outside the geographic target altogether. This is generally reserved for instances where serving an ad outside a specified geography may create privacy or legal concerns, and in lieu of in-flight course correction, absolute prevention must be employed. These alert and blocking features can protect both marketers and publishers from wasting inventory and from lowering the overall effect of a campaign. Although neither alerting nor blocking was used in the vCE Charter Study, both of these features are part of the comScore vCE offering.

Figure 15 Percent of Ads Delivered In Geography by Campaign

Brand Safety

DEFINING BRAND SAFETY

A major concern of all marketers is the relevance of the content in which their ads are delivered. When brands spend money on advertising, they need assurance that their ads will not run next to content that is at odds with the brand they are trying to build or the equity they have already established.

In this context, 'objectionable content' can generally be categorized into two buckets, the first being rather objective and the second being much more subjective and brand-specific:

Type I: Adult-Content and/or Hate Sites

Almost all brands want to avoid having their ads run on Adult-Content or Hate sites. Although there might be some differences of opinion on exactly what sites fall into these categories, there are generally agreed upon and industry-endorsed lists that define these, and almost without exception, reputable marketers want to avoid them at all costs.

Type II: Brand-Specific Criteria

There are topics, issues and/or content that certain brands don't want to advertise near because it directly conflicts with and/or detracts from the advertising's objective. For example, consider a major airline. For obvious reasons, an advertiser in this space might not want the brand's ad to appear next to an article about significant plane delays. Meanwhile, for countless other advertisers, delivering an ad to a consumer in this content would be completely benign.

Concerns relating to both of these categories are very legitimate. Unfortunately, though, due to the complex chain of online ad delivery through ad networks and exchanges, it is not always clear where an ad will appear.

BRAND SAFETY ON ADULT-CONTENT AND HATE SITES

To begin to understand the extent to which ads are delivered in content deemed inappropriate, the vCE Charter Study quantified the incidence of ad delivery on Adult-Content and/or Hate sites (Type I). The study used a standard definition of 'objectionable content', based on historical data of sites/categories most commonly identified as being 'not brand safe' by leading advertisers (See Figure 16). The measurement was applied to all campaigns.

Figure 16 Categories Deemed "Not Brand Safe" for Purposes of vCE Charter Study

- Piracy and Copyright Theft
- Anonymizer
- Child Abuse Images
- Criminal Skills
- Hacking
- Illegal Drugs
- Marijuana
- Spam URLs
- Botnet
- Command Control Centers
- Comprised and Links to Malware
- Malware Call-Home
- Malware Distribution Point
- Phishing/Fraud
- Spyware and Questionable Software
- Peer-to-Peer
- Torrent Repository
- Hate Speech
- Pay to Surf
- Nudity
- Pornography
- Sex and Erotic
- Content Server
- Private IP Address
- Redirect

To the surprise of many advertisers in the vCE Charter Study, 72% of the campaigns had at least some impressions served in this type of inappropriate content, which spanned a total of 980 sites (See Figure 17). The good news is that the actual percentage of impressions involved was quite small, less than .01%. However, the study also showed that 92,000 people saw these ads, meaning that if some of these people were either loyal or prospective customers, it could be counter-productive and/or problematic for the brand.

It should be noted that it is likely that this number is much higher when evaluating the broader, online advertising universe as there are certain factors that may have positively influenced the low percentage of inappropriate ad placements in the vCE Charter Study. These factors include:

- The brands under measurement were premium national marketers and therefore more likely to use higher quality content

- Many of the brands were already employing ad blocking technologies from external third-parties. Even with these technologies in place, several instances of inappropriate placements still appeared.

- In a few instances, select demand-side platforms chose to obfuscate the URLs where the ads were run, meaning that brand safety could not be measured and clients could not validate where the ads were run.

Despite the relatively low overall incidence of ads appearing next to inappropriate content, these findings still might be unsettling to advertisers. Even one ad impression delivered in the wrong environment can damage a valuable consumer's feelings toward a brand. With the increasing use of social media, a snapshot of a marketer's ad in an inappropriate environment can quickly go viral, exposing many more people to the unintended, but negative, association of a brand and inappropriate content. With 92,000 people being exposed across all vCE Charter Study campaigns, the advertisers' concerns are justified.

The daily alerts and blocking technology discussed in the geography section of the report can also be deployed for Type 1 and/or Type 2 content sites. Real-time alerts can be set to notify publishers, marketers and/or agencies if an ad is appearing in content deemed 'not brand safe.' In addition, the technology can completely block the ad from being served in certain environments. The definition of what is brand safe can be customized by the brand.

Figure 17 Percent of vCE Charter Study Campaigns with Impressions Delivered Next to Content Deemed "Not Brand Safe"

28%

72%

■ SOME ADS IN INAPPROPRIATE CONTENT
■ NO ADS IN INAPPROPRIATE CONTENT

92,000 PEOPLE EXPOSED TO Adult-Content and/or Hate Sites

⊘ | Fraud

DEFINING FRAUD

Today's world of online advertising involves many players in the ecosystem, each with a specific role and goal. However, the inherent complexity in this landscape results in a lack of control and visibility into online ad delivery. While the vast majority of individuals in the digital advertising ecosystem operate with the best of intentions, like any industry, there are fraudulent players that can disrupt the value chain. The complicated daisy chain of ad delivery can involve up to 20 different players, and quite often neither the buyer nor the seller has insight into each step in the process.

The term 'fraud' as it relates to online advertising encompasses a variety of impression-delivery scenarios. In some cases, there is direct fraud, which is deliberate and completely illegitimate, while other types of fraud are an unintentional by-product of legitimate business practices. In either case, this fraudulent activity does not deliver ads to actual people as intended, so should therefore be excluded from validated impression counts.

The vCE Charter Study specifically measured two aspects of inappropriate delivery:

1. The incidence of ad delivery via non-human spiders and bots identified by the IAB

2. The incidence of ad delivery on sites with clear illegitimate and intentional fraud

LIST OF NON-HUMAN SPIDERS & BOTS IDENTIFIED BY THE IAB

To help members of the online advertising ecosystem better understand and avoid issues relating to fraud, the IAB maintains a list of all known non-human spiders and bots. All IAB-accredited ad servers are required to filter out these known sources of non-human ad impressions. The use of some of the spiders and bots on this list is a completely legitimate practice employed by many websites for a variety of uses, such as to gather data to help index pages for search engines or to determine page content for the purposes of offering contextual ad placements. Regardless of their use, however, they do not deliver ads to consumers and can therefore wreak havoc on ad delivery and validation, causing a lot of wasted ad impressions and skewing the results of advertising effectiveness measurement. An analysis of vCE Charter Study campaigns showed that the average campaign in the study had 0.16% of total impressions being delivered via these spiders and bots, with a range of 0.03% to 0.49% (See Figure 18).

Figure 18 Percent of Total Impressions Delivered Via Non-Human Spiders and Bots as per IAB List

CAMPAIGN	
1	0.20%
2	0.26%
3	0.27%
4	0.06%
5	0.21%
6	0.09%
7	0.07%
8	0.12%
9	0.17%
10	0.10%
11	0.10%
12	0.09%
13	0.03%
14	0.49%
15	0.04%
16	0.04%
17	0.40%
18	0.10%

> **No brand is immune from fraud, and it should be an area of concern for all players in the ecosystem.**

SITES WITH INTENTIONALLY FRAUDULENT & ILLEGITIMATE ACTIVITY

In addition to known spiders and bots, part of the vCE Charter Study analysis included an evaluation of fraudulent impressions that were intentionally delivered via illegitimate online activity. Campaign delivery was manually reviewed for unusual activity indicative of intentional fraud. Such indicators might be unusually high or unusually low in-view rates or little or excessive mouse movement on the creative. Upon identifying these outliers, further human investigation was used to either confirm or negate the hypothesis.

The analysis revealed more than 200 sites that were guilty of this type of fraudulent delivery. Figure 19 below outlines some of the most common categories of sites with such activity. Additionally, the investigation uncovered that one of the sites delivered almost two million ads in the vCE Charter Study, supporting the need for consistent hygiene on campaigns to accurately measure delivery and ensure only ads that are delivered to actual humans are counted in validation and effectiveness measurement. Again these ads were not blocked from serving for the purposes of this study but instances of delivery were measured.

Figure 19 Custom Categorization of Sites with Intentionally Fraudulent Activity

NUMBER OF WEBSITES WITHIN EACH CATEGORY

While these two categories of fraudulent ad delivery accounted for only a small percentage of total ad impressions in the vCE Charter Study, there are a variety of other sources of fraud that consistently result in significant waste. For perspective, of the approximately 1 trillion URLs that comScore processes each month (40% more than all the traffic of the entire U.S. Internet population),

the application of comScore's full suite of fraud detection technologies identified levels of fraud ranging from 3% to 10% for a given campaign. Clearly, no brand is immune from fraud, and it should be an area of concern for all players in the ecosystem.

Implications: Putting all of the Pieces Together

The vCE Charter Study demonstrates that each dimension of ad delivery – viewability, audience targeting, geographic targeting, brand safety and fraud – has a significant impact on whether or not an ad has an opportunity to achieve its intended objective, and should therefore be a central component of ad delivery validation measurement.

Advertisers want to understand ad delivery to each of these core dimensions, and they also require a holistic, un-duplicated view of total campaign delivery. In order to achieve this un-duplicated accounting of delivered impressions, advertisers require a simple solution that eliminates all of the wasted time and error associated with merging disparate data sources. Consider, for example, results from a single campaign in the vCE Charter Study.

IN ONE CAMPAIGN WHEN MEASURED INDIVIDUALLY, THE FINDINGS SHOWED THAT:

38.9% of the ads were delivered to the right target audience

58.0% of the ads were delivered in-view

85.7% of the ads were delivered in the right geography

Figure 20 Intersection of Percent of In-View, In Geography and On Target Ad Impressions Delivered For a Sample Campaign in vCE Charter Study

Because of duplication across these three dimensions, one cannot simply sum the percentages, as this would suggest that 155.9% of the ads were delivered according to plan or that 118.4% of the ad impressions didn't deliver well. Instead, through the use of a single ad tag and a single measurement solution, vCE is able to validate that a **combined total of 33% of the ads were delivered according to plan** (See Figure 20).

IMPLICATIONS

Putting all of the Pieces Together

Prior to the introduction of vCE, the technology to validate all campaign impressions against core criteria was not fully available. The vCE Charter Study demonstrates that the technology now exists to identify and correct the source of sub-optimal performance, and that the opportunity to do so is substantial. In fact, in a perfect world, advertisers and publishers can contract and pay on the basis of impressions that were served for the campaign, but have also fully met the validity criteria.

vGRP: A TRULY CROSS-MEDIA COMPARABLE METRIC

In order for marketers to plan, measure and evaluate media across channels, they require digital campaign delivery measurement that can be translated into traditional metrics, like reach, frequency and gross rating points (GRPs). A central component of vCE is the validated GRP, or vGRP. The vGRP provides the industry with a cross-media comparable GRP metric that is also meaningful in the context of how online advertising works.

vGRPs are calculated by removing all ad impressions that did not have the opportunity to make an impact, including those that were not in-view, delivered to the wrong geography, served near brand unsafe content and subject to fraud. Similarly, validated target rating points, or vTRPs, include an overlay of audience-validated data, providing yet another actionable metric for marketers seeking to plan campaigns across channels.

The example below of a CPG brand helps to illustrate how vGRPs can impact the true reach and frequency of a campaign (See Figure 21). In this example, using non-validated impressions, the campaign appears to have delivered 46.7 GRPs. When using validated impressions, however, the campaign delivered 20.7 vGRPs, yielding a vRatio of 44%. This delta between GRPs and vGRPs in digital media demonstrates the volume of waste occurring, and highlights significant areas for improvement.

Figure 21 Gross and validated GRP for a Sample Campaign in vCE Charter Study

	GROSS	VALIDATED	**V** RATIO
Reach	8.7	4.9	56%
Frequency	5.4	4.2	79%
GRP	46.7	20.7	44%
TRP	61.4	24.5	40%

Conclusion: vCE Charter Study Key Themes

While the vCE Charter Study sheds light across every aspect of delivery, three consistent themes emerged in the findings.

1 Marketers are not necessarily getting what they expect when they buy online ads. From ads delivered next to objectionable content to ads that never had the opportunity to be seen, there are countless examples where the digital medium is simply not delivering on its promise.

2 The way online advertising is delivered varies significantly by site, placement and even creative. Across all dimensions of ad delivery, the vCE Charter Study demonstrated clear examples of situations where ad impressions were largely wasted. These findings suggest that measuring all dimensions of ad delivery for every placement in a holistic fashion is critically important.

3 Regardless of the quality of the buy, there is almost always room for improvement. Advertisers who understand and leverage the power of validation stand to gain much more value from the digital channel.

The digital medium has advanced the discipline of advertising in many respects, but it has also introduced significant complexity to the media equation. To maximize the value of this important medium, it is important to have the tools to ensure the industry regains its footing on some of the aforementioned pitfalls and continues to advance forward. The vCE Charter Study has illuminated many of the ways value is currently being left on the table. Now is the time for advertisers, publishers and other industry stakeholders to realize that value.

About comScore

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O'Connor, Alyssa

From:	Jeffrey Chester ████████████
Sent:	Wednesday, October 24, 2012 6:58 AM
To:	Kestenbaum, Janis
Cc:	Laura Moy; Angela Campbell
Subject:	RTB glossary and also COPPA related
Attachments:	6_PubMatic_Glossary.pdf

Janis: Another brief discussion of transparency available today to advertisers: **Transparency:** What advertisers want and exchanges and publishers historically have not offered. This typically refers to advertisers requesting complete lists of sites they will advertise on through either a network or an exchange. PubMatic believes that publishers can holistically manage their inventory through an SSP and if they are concerned about channel conflict, use the private marketplace function to segregate specific inventory but enable the buyer to see what they are buying in advance.

1

The PubMatic
Glossary of the
Online Ad Space

Defining Acronym Soup

ABC

PubMatic

PubMatic

The PubMatic Glossary of the Online Ad Space

Don't know your DMP from your SSP? Wonder how all this "Wall Street-ish" talk came the world of media? PubMatic believes that a little clarity is in order. Here's what all those terms and acronyms really mean. The following is an adaptation of an article written by industry analyst Kathryn Koegel in 2011 for Ad Age. Click Here for More It has been newly updated here at the request of PubMatic).
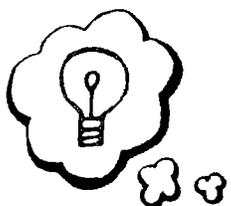
3MS: Or Making Measurement Make Sense. An initiative of the AAAAs, the ANA and the IAB (the leading acronymous trade organizations of Agencies, Advertisers and Online Publishers, respectively) that is trying to connect the dots of the different sources of data in online media: the audience measurement data used to plan with the ad serving data used to measure delivery and billing. The first wave of the project resulted in the concept of the "viewable ad" and a call to redefine the IAB definition of an ad impression.

Advertisers: Also called marketers. The people who control the money/marketing budgets the publishers want to get access to. They are often divided into Direct vs. Brand marketers based on how they measure their advertising effectiveness, but in an increasingly interactive media world, these are artificial definitions. A "Brand" marketer like Coke might be driving to an online promotion (and measure by the response) in the same way that a mortgage company might measures its online ads by how many requests for information they get based on their ads.

Advertising Option Icon: A cute little "i" that can be put on ad creatives so that consumers can find out how the data collected about them is being used, and set various preferences. It's administered by Evidon and part of a consortium of trade groups as part of an industry self regulation maneuver to keep Washington privacy advocates at bay.

Ad Blockers: Software enabled through a person's web browser which can prevent ads from being displayed. Booh – publishers have to get paid. Microsoft's latest version of Internet Explorer is pre-set to block cookies. The IAB is not happy…

Ad Exchanges: Wall Street-like commodity trading comes to online. Publishers designate inventory, buyers can access and buy it through machines. The idea is that it creates a rational marketplace and automates the tedious buying process, allowing publishers to set a "floor" or minimum bid, rules around what types of ads they will accept while buyers bid for varying types of inventory available – but rarely know in advance where those ads will show

up. There are pure exchanges where the inventory is "blinded" and now publishers are involved in the process by creating their own private exchanges or networks of sites that feed into an exchange. Leaders in the ad exchange space include Right Media, OpenX, and Google. The Weather Channel has their own private exchange and a consortium of Gannett, Hearst, The New York Times and the Tribune company runs Quadrant One.

Ad Networks (and various permutations thereof):
In the vast universe of online inventory, companies that aggregate impressions to make it easy for an advertiser to achieve scale in a buy.

- **Audience Based:** They sell with the idea of aggregating users based on either demography or intent (to purchase something). Audience Science and Collective are known for this.

- **Horizontal:** Wide base of inventory available, ie. not specialized.

- **Vertical:** Specialized. There are women's networks, networks of people in market to buy a car…

- **Mobile:** Sell ads onto wireless devices including phones and now tablets. There's more to it than just sales as it take work to get one ad to appear in more than one platform (ie Android vs. Apple). There are three big ones: Google (AdMob), Apple (formerly Quattro) and Millennial (independent) plus some focused on rich media or various verticals or mobile video.

- **Performance:** Clicks 'R Us. Wide range of inventory available without concern for placement: it's all about driving a direct action (a click, a sign up, some sort of conversion) at the lowest possible price.
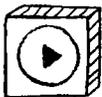
- **Video:** Sight, sound and motion are hot online (and generate the highest CPMs). It's recently been a land grab for more generalized networks to buy video networks or merge with them. They not only aggregate inventory but some also syndicate video content across a range of sites as there is not enough video inventory at the right price to meet demand. Leaders in the space include Tremor, Brightroll & Say Media.

Ad Ops: The footsoldiers of online advertising. They either work at agencies or publishers where they make sure the online ads get where they are supposed to through tagging (dropping 1x1 pixels onto ads so that they report back in response and placement). These jobs are increasingly being outsourced and automated leaving room for talented taggers to elevate their status to Media Revenue Strategists

Ad Servers: The technology that disseminates online ads, tracks and reports back on ad performance. DoubleClick/Google and Microsoft Atlas are the leaders along with "homegrown" which means a site built their own ad server. Any sophisticated IT team can create an adserver but the decision to "buy or build" is also a decision about whether a company has the financial and personnel resources to maintain and continually upgrade the capabilities of the ad server to meet changing market dynamics. The first ad server was DoubleClick's DART (Dynamic Advertising, Reporting and Targeting) which also was part of the birth of the acronym movement in online advertising.

Ad Verification: Software tools that advertisers use to determine if impressions are displayed where they are intended to and that the ads are privacy compliant. They are often used on exchange inventory where the advertiser does not know where the ads are placed or for audience targeted buys to ensure the ads reached their target or for "brand safety": ie, my ads aren't on pages with boobs. Company examples include: DoubleVerify and AdSafe. Now,

this kind of service is being built into the exchanges and the SSPs (like PubMatic) and DSPs so that there is no additional tagging required.

Agencies: The gatekeepers of the cash from the advertisers. Challenge is that while they used to just be either in the business of creative (coming up with ads) or media (buying ads from publishers) they are also often in the data business themselves, and have their own DSPs and DMPs. They realize they have a ton of data from all their clients and want to be able to harness it to make smarter buying decisions.

Algorithm: What RTB and programmatic trading are fueled by. At PubMatic, marketing technologists use proprietary algorithms to drive the speed and efficiency of the media selling operations. But, the company believes that its clients don't need to be math majors in order to use their tools.

Agency Trading Desks (ATDs): Media Buying Platforms/Desks or DSPs managed by an agency. The practice of an agency operating its own DSP so that they can enrich their pool of data from all buys executed. The bigger agencies are building systems so that they can look at the data across media and frequency cap: ie be able to control the number of times a person is exposed to specific ad. Examples include IPG's Cadreon and The Publicis Group's VivaKi's Nerve Center.

Analytics:
- **Third Party:** Panel-based companies that tell you who actually looks at a site such as comScore and Nielsen. The big new development in third party measurement from comScore and Nielsen is the online GRP, which is an attempt to create a metric that will enable cross media (ie TV + Internet) measurement. In spring of '12 Google announced that it too was building a panel to answer the "who" question in online advertising and also to offer a GRP metric.
- **First Party:** Software tools (Google Analytics, Omniture, Webtrends among them) operated through tags on a site's pages that let publishers know statistics on how many pageviews a site is generating and how many unique users (a machine proxy for people). Their numbers never match up to third party tools due to issues like cookie deletion and different counting definitions.

Audience Targeting: Behavioral targeting with new clothes and broader capabilities and applications. The practice of using data to imply an audience, either by demography, lifestage or some sort of intent like people who have searched for information on a car or new phone purchase. If I am looking to reach an "auto intender" I advertise to them wherever they are online – not just on auto sites. Agencies are big believers in buying audience targeted impressions as it increases their efficiency and for many types of products, especially packaged goods, they are looking to reach broad audience segments like Adults 18 - 34 or Women 35 - 54 – much the way they buy in television.
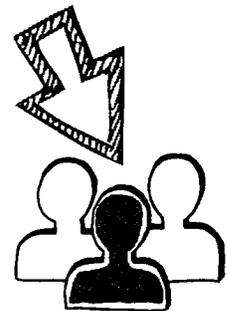
Audience Management Platforms (AMPs): The folks who provide the audience targeting now have platforms to automate the process of matching the data and buying audience targeted inventory. Since many of them also operate ad networks, it's a natural extension. Audience Science and Crowd Science are examples.

Beacons: A 1x1 pixel tag typically used by an advertiser or a third party ad server to track a unique user's activity over time. If someone was exposed to an ad on day one of the month, did not click on it but went to that company's

website on day 30 and did a desired activity (bought shoes, etc.) the beacon would attribute that activity to the original ad impression (the action itself is called a view through). DoubleClick, which originated the concept, still uses the name "spotlight tags."

Behavioral Targeting: A now old-fashioned term that has been rebranded as "audience targeting."

Big Data: The interactive world we are living in when we talk about "terabytes" in terms of volume and the processing of the huge amounts of data generated by media activity, and increasingly by social networking. Facebook is arguably the king of "big data" but no one knows precisely how they will use it.

Blinding: The practice of not designating where ad inventory will be placed, which is very often done with exchanges at the publisher's request. Publishers do not want a "channel conflict" of someone/thing besides their sales staff selling the inventory (never let your customer know someone else sells it cheaper).

Blocked Sites: Publishers who designate certain advertisers as not being able to buy through a DMP as they are handled by the publisher's direct sales force. Or, those advertisers are deemed inappropriate to appear on that site.

Brand Protection: Tools that enable advertisers to buy inventory online that automates the process of making sure that the content is not objectionable or contradictory to the advertiser's brand image. It most often applies to sites with adult content or any sort of objectionable speech. Pubmatic has tools that are a part of its SSP that integrate this activity so there is no separate tagging required.

Brand Impact Studies: Studies offered by companies like Dynamic Logic, Insight Express and now Nielsen and comScore that use a control/exposed methodology to determine whether an ad that was served had an impact on metrics like ad recall, brand favorability and purchase intent. The industry is increasingly moving to simpler methodologies (questions answered within a banner ad) with more limited questioning from companies like Vizu and KN Dimestore.

Cloud Computing: What makes all this data connection and movement work. In the world of ad exchanges, many of them run on the computing cloud created by AppNexus which operates as an exchange of exchanges.
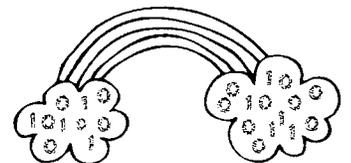
Clutter: Your typical web page with lots of ads surrounding content. One of the discussions around how to improve the performance of online advertising surrounds the issue of how many ads per page of content is optimal for both the user and the advertiser.

Complexity: What digital advertising drowns in a sea of. There are so many layers of technology and data and management of it all to make just one ad buy. The goal of a company like PubMatic is to simplify processes and enable publishers to reduce the complexity that impedes their ability to generate revenue.

Contextual Targeting: There are two kinds: natural context (place a bank ad on a finance page) and that of a contextual advertising system which scans the text of a website for keywords and returns advertisements to the webpage based on ad messages that match with those keywords: ads on the side of your Gmail that pop up text ads based on your email content.

Cookies:

- **First party cookies:** What your bank and Netflix uses to know it's you.

- **Third party cookies:** What an ad server drops on your browser to designate that you have shown interest in various product categories or based on your activity can be presumed to be of a specific demographic group.

- **Flash Cookies:** Almost universally publicly derided in the industry (due to the difficulty of getting them off your computer) but commonly used for the same reason and you can have as many as you want per Flash creative. To delete them you have to go to Adobe's website or manually do it through the Flash player setting on each site you access. They've also become an invaluable tool for third party research companies as due to the difficult of deletion they return more accurate counts.

- **Fresh cookies:** Depending on the product category, the fresher the data attribute the better. If I'm in market to buy a cell phone I probably only shop around for a week or two so the fresher those cookies dropped on me, the more reliable.

- **Cookie Deletion:** People concerned with privacy regularly use a function of their browser to "dump their cache" of cookies. If you do it, be careful to just dump the 3rd party ones or you will have to enter your information all over again at places where you have registered. It messes up frequency caps so if a user dumps regularly they will get the same ads all over again because the ad server thinks it's someone new.
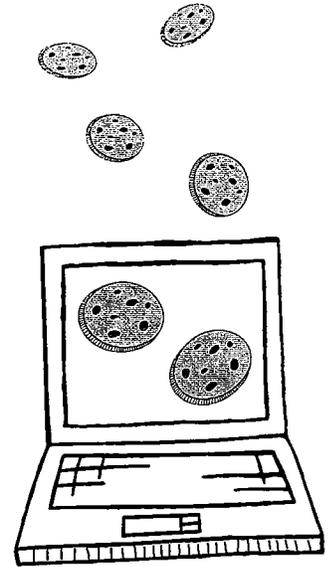
Creative Optimization: Software systems that enable an advertiser to default to the highest performing creative or manage the frequency of exposure, typically on a direct response basis.

CPC (Cost per Click): All the amorphous branding talk aside, most online ad buys are measured on some kind of immediate action, most likely a click through to a website or custom landing page for a campaign. The advertiser only pays for ads clicked upon. Publishers dislike this metric as they say they are penalized for bad creative.

CPM (Cost per Thousand): Cost per thousand impressions delivered. Publishers prefer to charge on this basis as it is closer to an exposure model rather than a direct response one: ie, they get paid on delivering an ad, not on whether someone clicked on it.

eCPM: Effective CPM. The reality of most buys is that they are a mix of CPM and CPC. It answers the question: If I buy a CPC campaign what would I have paid if I bought it on a cost per thousand (CPM basis) and thus used to compare whether the CPM or CPC buy was actually more cost effective.

eCPM calculation is: cost/(impressions delivered/1000).

DAA (Digital Advertising Alliance): A whole bunch of acronymous trade orgs involved in online who push for self regulation including: AAAAs, AAF, ANA, DMA with support from the CBBB. The alliance includes over 5,000 companies in the space.

Data Aggregators: They pull in ad serving data, conversion data, 3rd party data including those from offline sources (stripped of personally identifiable info like names and addresses) like Acxiom, Polk and Experian to attach as many attributes as possible to online cookies to refine targeting capabilities.

Data Leakage: Publishers own their data on their users and the concern is that when selling inventory through an exchange, there will be data leakage, or the ability of advertisers to scrape user attributes from that inventory. PubMatic has tools that prevent this from happening.

DDM: Data Driven Marketing: the era we are now in.

DMPs (Data Management Platforms): Self-service "dashboard" tools that perform a range of services from collecting, managing, segmenting, sharing, and analyzing marketers' advertising data including assuring publishers that their data is their data.

DSP (Demand Side Platform): A computer-based platform that automates media buying across multiple sources using unified targeting, data, optimization and reporting. Data is treated like media in that it is layered across the buy and becomes just another part of the cost. DSPs do not own, purchase, represent or resell inventory from publishers but connect to SSPs so that publishers can sell it themselves.
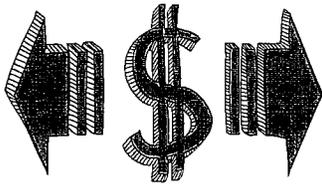
Dynamic Pricing: The ability of an SSP to sell inventory at a price that matches and changes with market demand. A publisher can choose to set up floor (or a minimum, the opposite of dynamic pricing) or allow the impression to go to the highest bidder based on timing and its particular data attributes.

Exchange: The exchange is used to define a technology/business model where vendors in the digital ecosystem place themselves as a middleware solution for the direct purpose of driving market liquidity between the demand and the publisher side. The primary purpose of improved liquidity through exchanges has been a solution for managing lower middle and long-tail publisher inventory.

Engagement Rates: What percent of total impressions for an ad were hovered on, clicked within—basically some activity related to a rich media ad. Smart advertisers are taking it the next step and asking questions about what impact a "hover" has on ROI or an actual sale.

First Look: The ability of a publisher through an SSP to enable a specific advertiser to bid on impressions at a premium for that chance to have the first option on them. This ability in digital sales is something like what is done in the Upfronts in television. Pubmatic's Private Marketplace has First Look functionality built into it.

Frequency Capping: Using cookies to manage the number of times a user sees a specific ad creative. Never been done for most insurance, teeth whitening or belly fat ads, ads on many digital video sites or tablet content. A real problem for the user experience and causes waste for advertisers when frequency capping it not done.

FUD: Fear, Uncertainty and Doubt. What drives many business decisions among media companies. PubMatic would like to break through the FUD experienced by many large media companies by enabling them to take charge of their ad inventory in a holistic manner, automate tedious operational tasks and increase their revenue from each and every impression.

Guaranteed/Non-Guaranteed Inventory: Publishers often segregate their inventory into premium which is sold on a flat CPM basis by their sales staff, which is sold through exchanges for no fixed price.

Holistic Asset Management: The ability of a publisher to manage their content assets for best user and advertiser experience. This involves the optimization of the user experience through personalized content and the optimization of the ads to user attributes.

HTML5: What we should all be learning in our spare time as agencies and publishers are in great need of the expertise required to code in this next generation of programming language for the web that will rule also on our phones and tablets as well as the wired web. Apple sanctioned it as the programming language for their phones going forward as well as the iPad. Google is down with that.

Impression: An online ad that appears upon calling up a web page – there is an approved and very technical definition that took years of negotiation by the IAB and focused on a common definition for the ad servers that was finally agreed to in 2004: Click Here And now the 3MS initiative says this definition has issues: most notably that it does not specify that the ad was ever viewed by an actual human, but merely that the page of content it is on was called up technically.

Inventory: Get your ad impressions here…for some off reason in online, people talk as if they are moving units of underwear or canned goods. TV people don't talk like this, PubMatic believes publishers shouldn't either.
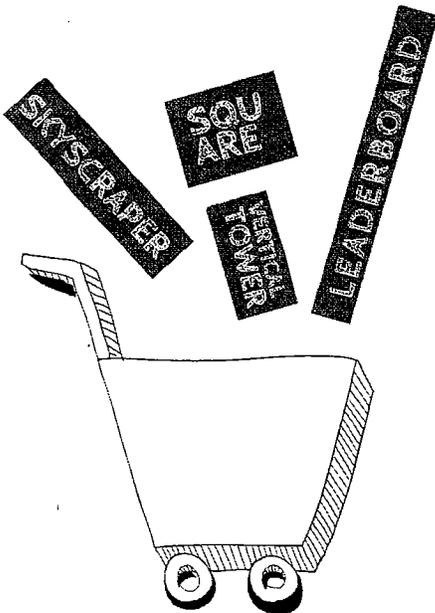
- **Content farm:** Inventory created specifically to place ads on it and souped up through SEO so that people find it. Often offers context, but marginal context at best.
- **Direct Sold:** Get it from the publisher salesperson, typically high quality stuff that may involve specific contextual placements or sponsorships of hot events or content areas.
- **Contextual:** Inventory that relates to a category of content or advertising: business pages on The New York Times are contextual inventory for finance. Contextual can also mean those ads sold based on semantics that show up on the side of mail pages or pop up from double-underlined content.
- **Premium/First Tier:** As good as it gets, often contextual or highly-trafficked areas like home pages and lead section pages.
- **Mid Tier:** Inventory from a site you may have heard of that has decent content but not a top 100 site as ranked by comScore.
- **Long Tail:** The vast unwashed inventory available from no-name sites and blogs. There could be some valuable stuff in there that people really look at…or not. Recent tests from the 3MS initiative and comScore show that long tail sites have the biggest challenge with viewability rates.
- **Remnant:** (or Yield Optimized) Every large publisher's got it. In a world of limitless inventory – they keep adding pages – if you can't sell it direct or because of its context, it's remnant to be sold through an exchange near you. Data is often appended to remnant to make it into an audience buy which is a good thing: advertisers of mass products don't always need or want to pay the premium for context or to buy direct.

Latency: The problem of a page of content taking too long to load. Ad ops experts often say that latency is caused by all of the pixel tags dropped on the ads. Tag management can help solve this problem.

Lost Opportunities: Tools within SSPs that help a publisher analyze what they sold at what price and whether choosing to automate some direct sold would have increased revenue. At PubMatic, this is the name of a specific report.

LUMA Landscape: Terrence Kawaja, a pundit and one of the VCs backing a lot of companies in the marketing technology space came up with a logo-glutted map of the online display ecosystem (he's also done similar ones for search and mobile). The industry uses this map as a Rorschach test: either you see it as innovation and the dynamic nature of the market, or you see it as the chaos and complexity that is preventing publishers from making money and agencies from shifting spend from television to interactive. (See the LUMA Landscape Here)

Media Revenue Strategist: A new role within publishers that ad ops people can be elevated to. PubMatic believes that some ad ops processes can be either outsourced or automated, freeing up these valuable employees to work between the technology and sales functions to more effectively and efficiently allocate resources (between people and machine sold) and valuate inventory so publishers get the highest possible return.

Media Silos: The habit in agencies of focusing their buying, planning and creative people based on a specific media specialty: ie TV people do TV and couldn't give a fig about online and don't know their cookies from their click rates. Digital people think no one watches TV anymore and wouldn't know a GRP from a CPP. Some agencies are starting to create brand-focused media teams, but this is rare. This fits the reality of how most agencies buy, but leads to limited thinking in term of the connections between media usage. It also makes little sense in terms of the increasing usage of more than one media at once.

Native Advertising: Advertising that appears as a part of the content or is highly contextual. It was often used to refer to sponsored content, but increasingly is being used to describe advertising that appears on platforms like Facebook and Twitter that is placed based on user data and must be specifically created for those platforms.

One By One (1x1) pixel tagging: What an ad trafficker needs to "drop" (an invisible image basically) in order to analyze a view through.

OS (Operating System): No, not the one on your computer, but an OS for all of digital media that would eliminate some of the complexity that makes it so hard for publishers to make money and advertisers to buy. The idea was first floated by Terence Kawaja and is being eagerly embraced by Google, many of the exchanges and the SSPs. PubMatic believes that there should be more than one digital media OS – and that to best serve both buyers and sellers it should be independent of media and data ownership.

Platform: The movement in the marketing automation space for the creation of stacks of technology that solve many issues in one self service platform: RTB, data management, tag management, brand protection....

Point Solution: A technology that just focuses on one function needed within the digital marketing technology spectrum. So, a brand protection tool, a tag management tool, a data management provider. Too many point solutions add to the complexity issue in digital media.

Private Marketplaces And Exchanges: The ability of a publisher through an SSP to carve out certain inventory and sell it as a programatic premium to buyers willing to pay for an exclusive opportunity on that inventory. Private Exchanges and Private Marketplaces are sometimes confused as the same solution but there is a fundamental

difference in exchange versus marketplace strategy. Exchanges prioritize liquidity over margin, while marketplaces put the importance of margin management over liquidity. PubMatic offers a complete Private Marketplace service as part of its platform, since publishers create and maintain a market for their media and do not just trade inventory.
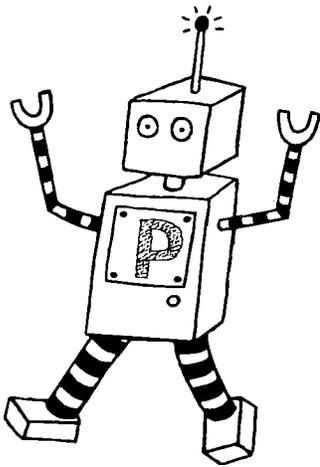
Programmatic Buying: The practice of automating the buying of online ads by using algorithms to drive the best price possible for each impression. This takes place through DSPs connected to SSPs.

Programmatic Selling: The practice of using a DSP to automate the sale of media assets. PubMatic enables a publisher to sell at four levels programmatically: basic yield, RTB, audience and private marketplace.

Programmatic Trading: The practice of fully automating both the buying and selling of online media so that machines are talking to machines with no human intervention. PubMatic believes that this sort of approach leads to further commoditization of the online media space.

Publishers: The companies that produce the content on which ads are placed. In the digital world of media everyone (including brands) are now publishers – or are sometimes just called content producers – as every company needs a consumer-facing presence through the web, social networks…any way that people might want to connect with them. This democratization of content has lead to much hand wringing at places like Time Inc., Hearst and Conde Nast. Is the Huff Po as valuable to an advertiser as The New York Times? Therein lies the challenge: quantifying the value of various types of content.

PubMatic first to market with RTB for publishers	$352M US RTB total spent	5/10 Premium Publishers use RTB	120% RTB growth from 2010	$6.47M Projected RTB spend US + UK + GER + FR
2009	2010	2011	2012	2013
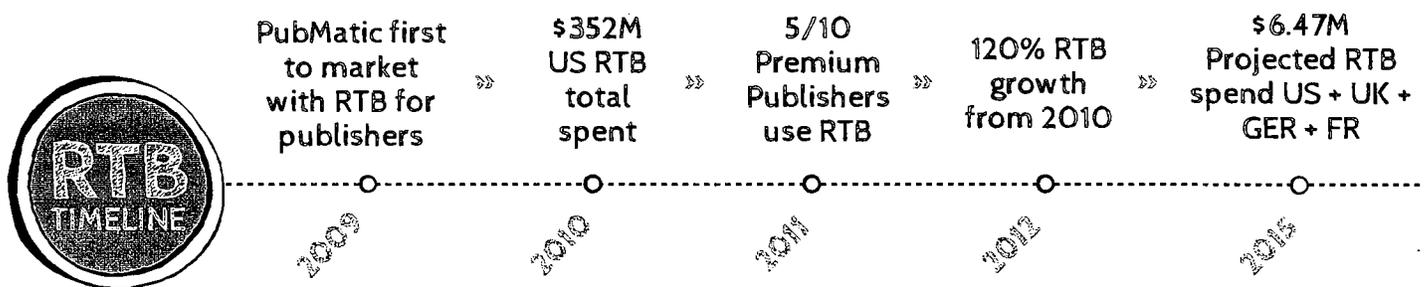
RTB (Real Time Bidding): The dynamic process of buying and selling impressions instantaneously and in a live auction. The auction determines a winning bidder who then has the right to place an ad message into the available ad position using audience attributes as signals to determine the best ad message in that moment. Pubmatic was the first to bring real time functionality or RTB to publishers through its sales platform.

Re-Targeting: The usage of data especially from user behavior to find that user again and send a targeted message to them. Privacy advocates refer to this as "cyber-stalking." Advertisers know it often works well as some products have longer purchase consideration cycles and being able to serve specific car ads to someone who searched for make and model info on an auto site elsewhere can lead to higher conversions over time. Can also benefit the consumer as e-tailers often use promotions in their retargeted ads to try to close the sale.

Second Price Auction Model: When an ad put for sale through a DSP fails to hit the floor or minimum pricing set and the publisher decides it's worth putting it out again at a different price.

Semantic Targeting: Targeting where a computer system examines all the words on a web page to identify the meaning of those words and not just the simple context to determine appropriateness for an ad placement. Say a news page contains the word "golf." Calloway wants no part of it if it's an alligator-bites-man-in-Florida-on-golf-course story.

Sentiment Analysis: Can also be used to determine if the "sentiment" of the page is positive or negative and thus suppress an ad (ie. helps Calloway avoid an article about how golf is a lousy sport for overweight white guys in media).

Social Targeting: Using data to find obsessive social networkers who influence the "social graph" ie. the people who talk about what they are going to buy, what they actually bought and what they thought about it.

Stack: Nothing to do with the shapely form of a woman but everything to do with what technologies an advertiser or a publisher layers to create the ultimate buying or selling platform. PubMatic is creating a technology stack with the publishers' needs in mind and no inherent conflicts of interest. PubMatic does not also own any media, network or data.

Supply Side Platforms (SSP): A DSP but from the publisher or content producer's perspective. PubMatic prefers to define this as Strategic Selling Partner. This is not about moving widgets but about helping publishers find the right advertiser at the right price for every impression.

Tag Management: With so many point solutions and tags needed for everything from audience measurement to ad delivery to brand protection, the approach to managing (or even automating to simplify) all the little pieces of code required to deliver an online ad these days. There are companies that offer tag management as a point solution; PubMatic's SSP has this functionality baked into their technology.

Terence Kawaja, President and CEO of LUMA Partners: A funny guy who advises on this "space" and issues a much-talked about chart that visualizes the acronyms. You either see his chart as emblematic of the vitality of online advertising (certainly reflects investment in the space) or as an illustration of what a mess it all is.
(See the LUMA Landscape)

TLA: Three Letter Acronym. What the online ad industry has become and what PubMatic seeks to avoid.
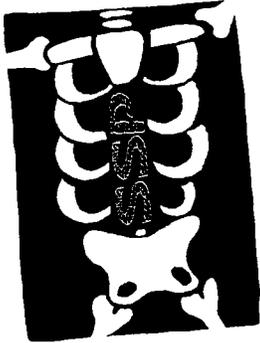
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Yield Optimization: From a publisher perspective, how much are your impressions worth and how can you manage flow of inventory to make the most money? SSPs look at each impression available on a web publisher's site and then match the impression with an available ad from an ad network or exchange. Right now this is typically only done as an assessment of remnant inventory but could be applied to all inventory.

View Through: If someone saw an ad but did not click and eventually did online what an advertiser wanted them to, does it count? Yes. See beacons.

Viewable Ads: The first outcome of the 3Ms initiative that calls for redefining online ad impressions into those that are viewed by a human and not merely loaded into a computer browser. Some see this as a useful step towards a metric that coalesces with TV, which is based on an opportunity to see metric, while others feels that there are too many years of data on the old definition to make the switch now or that non-viewable impressions get winnowed out by agencies for their lack of impact. If the industry switches to this definition of an online ad impression it will impact historical data, ad servers will need to reengineer their counts and attribution models will also need to be recalibrated.

VCs: The cash and promise of going public or getting bought by Google or Facebook that fuels it all.

Unified Optimization: The idea of unifying the tools and reporting available through an SSP so that a publisher can look at their inventory in a holistic manner and optimize their sales accordingly. This involves getting rid of artificial constraints on inventory such as designation of guaranteed vs. non guaranteed, remnant vs. direct sold.

About the Author: Kathryn Koegel, Chief of Insights at Primary Impact, works with media and interactive marketing companies to turn their data into industry insights. See her report for Ad Age: Building Brands Online for a complete discussion of the issues addressed Here.
She writes extensively on marketing automation and mobile including a 5-Part series for Ad Age. She was the VP of marketing for one of the first internet ad networks, Phase2Media, and was the Director of Research & Industry Development for DoubleClick. She can be reached at kathryn@primaryimpact.com.

O'Connor, Alyssa

From:	Jeffrey Chester ~~████████████~~
Sent:	Monday, October 22, 2012 2:50 PM
To:	Ramirez, Edith
Cc:	Kestenbaum, Janis
Subject:	Frontline on digital campaign for Pres--worth a look

http://www.pbs.org/wgbh/pages/frontline/digital-campaign/?elq=72312a2fd94b446b84e8dafb6228a267&elqCampaignId=440

From:	Jeffrey Chester ⬛⬛⬛⬛⬛⬛
Sent:	Monday, October 22, 2012 4:30 PM
To:	Jeffrey Chester
Subject:	Wash Post on our COPPA complaint, McDonald's

http://www.washingtonpost.com/blogs/post-tech/post/mcdonalds-removes-networking-features-in-some-online-games/2012/10/22/419c1f4a-1c63-11e2-ad90-ba5920e56eb3_blog.html

10/22/2012

McDonald's removes networking features in some online games

By Cecilia Kang

McDonald's said it has removed social networking features in some of its online games after a privacy advocacy group complained to federal regulators that the restaurant chain was violating child online privacy laws.

In a complaint filed last August to the Federal Trade Commission, the Center for Digital Democracy said McDonald's was using a "tell-a-friend" feature on games and other functions of HappyMeal.com and McWorld.com that asked children to upload photos and videos onto the site and then pass along that information to friends. McDonald's also asked for children to list the e-mail addresses of friends, without gathering parental consent for that information.

The practice, CDD said, was a form of deceptive viral marketing that violates the Children's Online Privacy Protection Act. By collecting information such as e-mail addresses, McDonald's wasn't adequately disclosing its collection of personal data and didn't ask for parents' permission.

McDonald's said in a statement Friday that it has scrapped the "forward-to-a-friend" options that "allowed users to e-mail ecards, links and photos to friends and family."

"Rest assured, the online security of our guests — especially our youngest guests — remains a top priority for us," said Danya Proud, a spokesperson for McDonalds. "We continuously review and enhance our sites as appropriate and we recently made some updates to HappyMeal.com, including removing the forward-to-a-friend options."

The changes reflect a growing debate over online privacy protections for children as the FTC tries to update its children's online privacy rules.

On the HappyMeal.com site, McDonald's features 30 games for children. The FTC is considering new rules that would make third-party partners responsible for illegally collecting information about young children. That could include a company's use of "like" buttons from Facebook and "tweet" buttons for Twitter.

CDD Executive Director Jeff Chester urged regulators to toughen privacy laws.

"It took a complaint to get the company to realize that it wasn't respecting either the privacy of its young users or their parents," Chester said. "McDonald's actions illustrate why the FTC must do a better job enforcing COPPA's requirements, and why the commission's proposed updates to cover new privacy threats to kids — such as mobile tracking of kids — should be adopted."

From:	Jeffrey Chester ███████████████████
Sent:	Sunday, October 21, 2012 12:18 PM
To:	JDL; Ramirez, Edith; Brill, Julie; Vladeck, David
Cc:	Engle, Mary Koelbel; Mithal, Maneesha; Olsen, Christopher; Kestenbaum, Janis; Weinman, Yael; DeLorme, Christine Lee
Subject:	IAB doc, cookies=individual
Attachments:	Innovations_In_Web_Marketing_and_Advertising_delivery.pdf

This report on digital microtargeting by political campaigns was released this month by the **IAB**. It shows, in my view, how cookies and other data techniques identify individuals--and also reflects the changes in targeting (from sites to individuals) increasingly used by all (and the role of databrokers). I think it's relevant in the COPPA proceeding. My bold.

excerpts: "Here's the difference between targeting and microtargeting: Every campaign is targeting in some way, shape or form—
beginning with doing so geographically," explains Ken Goldstein VP of top political ad tracker Kantar Media's Campaign
Media Analysis Group. **But with email and cookie-enabled microtargeting, he continues, instead "*you are targeting down
to the level of the individual, wherever they are.*"**
The key to the whole process of microtargeting messages to voters is Big Data. "**It tells us who they are, where they are,
how old they are, what they like on Facebook, what they talk about online—and what they dislike**," Jake Rosen, a digital
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... Such offline lists of voters and, often, their party affiliation—taken from state voter registration rolls—**are carefully mashed up**
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tag along as we surf the Web.... The trick, Feltus says, is to match email addresses and cookies with specific tracked online and voting
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This information is further refined by matching it with databases containing specific email addresses that people use to
subscribe to consumer and political Websites, and with information they post on social media... **Microtargeters also work with third parties—combining their data and their clients' data to be sent out and sorted with vast**
stores of data held by Big Data brokers, such as Acxiom, Experian or BlueKai. For most applications, these data firms are
entrusted to provide powerful targeting information—combining their offline and online data with the microtargeter's, while
stripping out private, name-specific datasets. "PII" is unnecessary in the case of targeting an ad or an emailed message; the
goal is simply to get the right ad or emailed message to the right audience... In this way, the microtargeting process can simultaneously respect privacy and be effective. **The message—whether ad or**
email—need not be connected with a particular name, but only a certain email address or cookie. That email address or
cookie matches a nameless person whose voter registration file and online exhaust reveal them to be someone likely to
respond positively **to a particular ad or communication—one, in fact, crafted with them in mind.... in microtargeting you are not buying ads on a site—you are buying the audience you want** as that audience moves
from site to site.
 "There has been a fundamental transformation of the online advertising market—everything has become inverted. **You used to buy on a qualified site, and you**
hoped that qualified customers would go to that site. It was site first, and audience second," Masterson explains. "You no longer buy a site and hope you find that audience. Instead you advertise to a specific target audience—and you only buy on those sites when that audience shows up."... Political microtargeters send over their data—with all PII removed or coded—to large databrokers to get email addresses
and other data that matches the files, according to Joel Neubert, director of sales for Acxiom Government Solutions.
"We see if we can't just get a match on the people that they send us," Neubert tells IAB. "We go ahead and append that
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...
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content websites, as further means to target messages.
"We say, look, if somebody on our list is also on your registration, would you drop a cookie for us?" Masterson says of
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district that they're in—we have 18 attributes on it."

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IAB Presents
Innovations In Web Marketing and Advertising

Big data delivers on campaign promise: Microtargeted political advertising in Election 2012

October 2012

By Nathan Abse

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Executive summary:

Digital political advertising has quickly become an integral part of political campaigns in the USA, and in the current election cycle it is clear that the increasingly accurate microtargeting of messaging made possible through the use of Big Data is playing a crucial role in all stages of these contests—including recruiting and fundraising, persuasion and get-out-the-vote efforts. While microtargeted messaging is only beginning to feature in state races, the practice now occupies a prominent—and possibly determinative—role in this and future congressional and presidential contests. The market for election advertising in 2012, across all contests and platforms, is estimated to top $10 billion. The online portion is projected to be the $160 million-plus range—a small part of the total but at least six times more than the $20 million-plus spent in 2008. This paper focuses on the presidential contest, which will account for about one-third of the total election contest spend and a similar or higher proportion of the online spend. It should be noted that the same eased federal disclosure laws governing campaign finance that in part have led to rapid growth make hard numbers on this year's online spend difficult to determine. This paper is the product of in-depth interviews with more than 15 digital political advertisers and consultants involved directly in microtargeting, as well as data brokers, political scientists, reporters and other experts. The author identifies several specific trends that point to continued refinement of techniques and growth in the online political microtargeting market—as well as a possible need to develop common nomenclature and best practices—in coming election cycles.

Key findings:

–Microtargeting has become the predominant means of delivering political messages online.

–Microtargeted political ads are growing in use as a tool among campaigns and outside groups, political consultancies, as well as public relations firms—all of which coordinate and direct political ad buys.

–Microtargeted political ads are being used at all key points in political campaigns—to recruit and raise money, to persuade undecided voters and to get out the vote. They make use of online and offline data to find appropriate audiences, and create constantly-adjusted models to further refine their focus.

–Microtargeted messages are part of a new norm of buying qualified audiences, not qualified websites.

–Microtargeting online and TV often address different needs, but TV is sometimes preferred to online in part due to a perception that online ad buys are more complicated.

–Microtargeted political ad buys are up in part due to higher spending by deep-pocketed donors post-*Citizens United*—but a wide array of new voices also buy for the capability to find niche voters.

–Microtargeting firms must continue to be aware of and address privacy concerns.

"This is going to change the political environment. It's a marketing tool that has now migrated into the political realm. And I think that looking forward, almost no campaign can afford to ignore this technique."
-Rep. Gerry Connolly, D-Va., on the use of Big Data and microtargeting...

Introduction: What is political microtargeting?

Microtargeting is increasingly being used by campaigns, "outside groups," political consultancies, and public relations firms—all of which coordinate and direct political ad buys

The latest, greatest technology has long played a prominent role in American election campaigns—by the mid-1800s political communications had leapt from horseback couriers to telegraph lines, and by the 1900s the telephone joined the telegraph as a key tool in the contests that ended on Election Day. Recordings and film, radio, TV and computer-aided direct mail—a hundred years of rapid developments pushed in part by the press of modern advertising and in part by politicians eager to communicate with constituents—all followed. Technological breakthroughs, affecting politics and everything else, are now taken for granted by a generation that barely notices the sci-fi velocity of change.

But breaking away from the pack of previous electronic platforms—a mere fifteen years into the Web era—political campaigns now for the first time can actually reach out to prospective voters with messaging that addresses *each person's* specific interests and causes—just as generations of political canvassers have done on their feet in door-to-door rounds, and just as we all do in everyday one-on-one conversations.

The Web's message-customization methods are quantum-leap adaptations of longstanding marketing techniques. For decades, campaigns have targeted prospective voters by demographics—income and interests—most often through direct mail and phone canvassing, honing these capabilities by cross-referencing census and voter information with consumer survey results. But now, instead of compiling such information from small, periodic surveys, it is culled directly, in real time. Campaign ads run on this information, pulled together and refined constantly through the use of multiple data sources—known as Big Data. These could include offline data from voter rolls and property records, as well as online data generated by our everyday political and consumer behaviors as we live more and more on the internet—leaving a "data exhaust" about our interests, including commercial and political Websites we visit, and social media led by Facebook, Twitter and other electronic forums.

The 2012 election year will go down in history as the year that online political advertising hit its stride and finally matured, playing a central role in the election process—exactly as TV did in the early 1960s with the famous "daisy" ad pressing voters to turn out for President Lyndon Baines Johnson. Politics—and political ads—have been on the Web since the 1990s, and were key to Howard Dean's 2004 and Barack Obama's 2008 presidential efforts. But the current presidential election cycle has seen a meteoric rise in online ad spending. Overall political ad spending on all platforms is predicted to jump 40 percent over the last one, while the total online buy for 2012 is on track to exceed early predictions of nearly $160 million—a *six-fold rise* in this market, according to some estimates. [1]

How does political microtargeting work?

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[1] SOURCE: Borrell Associates, "Political Advertising: The Flood of 2012," Mar. 2012, summary available at:
http://www.borrellassociates.com/component/virtuemart/?page=shop.product_details&flypage=garden_flypage.tpl&product_id=1025This industry report estimates a total political spend—federal, state and local—of $9.8 billion for election cycle 2012, versus $7 billion in 2008, a 40 percent gain, with the online component predicted to jump six-fold, from $22.2 million in 2008 to $159.2 million in 2012. However, if current spend rates hold, that estimate is likely to be exceeded. Leading campaign finance tracker Center for Responsive Politics reported that by Aug. 21, 2012, over $50 million already had been spent on online paid media, and—if trends set in recent presidential election cycles hold—the Borrell estimate will be handily exceeded (see http://www.opensecrets.org/pres12/expenditures.php.) Furthermore, while CRP does not forecast media buys, historically those rise with the aggregate raised—and CRP estimates that the total raised by all entities participating in federal campaigns in election 2012 will grow from $5.2 billion to $5.8 billion, an 11.5 percent increase. Respected Wells Fargo analyst Marci Ryvicker, who does forecast media buys, in September 2012 raised her political ad spend estimates for this cycle on TV and online: http://www.adweek.com/news/advertising-branding/analyst-political-advertising-boost-tv-coffers-23-143342.

Political microtargeting is a variation on the same techniques that drive targeted online consumer advertising—techniques that well before this election year were serving our Web browsers ads based on sites we'd visited and searches we'd performed.

The goal of the microtargeter is that the right message is emailed to the right address, and the right ad is delivered to the right audience—to make sure that the messages campaigns send are effective, and because a high proportion of impressions are seen by the appropriate audience provide a good value for clients.

Just as in the consumer space, the targeting aspect—audience-tailored online ads and emails—of political messaging relies on a data "mashup," the controlled mixing and sorting of different types of data. Big Data, culled from vast databases of offline and online data, is sorted to help target those ads as well as to tailor email messages.

'Personas' and segments ...

"Here's the difference between targeting and microtargeting: Every campaign is targeting in some way, shape or form—beginning with doing so geographically," explains Ken Goldstein VP of top political ad tracker Kantar Media's Campaign Media Analysis Group. But with email and cookie-enabled microtargeting, he continues, instead "you are targeting down to the level of the individual, wherever they are."

The key to the whole process of microtargeting messages to voters is Big Data. "It tells us who they are, where they are, how old they are, what they like on Facebook, what they talk about online—and what they dislike," Jake Rosen, a digital and social strategist at Fleishman-Hlllard who works with political clients, says. "Then we can microtarget and customize all content and advertising—literally everything—to suit specific 'personas.'"

Rosen explains that he and his team typically build many—sometimes twenty or more—archetypes, in the process of segmenting a population for messaging purposes. "We go in and build the '*personas,*' each of which is a type in your target," he says.

Every aspect of a likely voter—their political and consumer interests—is broken down and analyzed, Rosen explains, so that each individual's constellation of tastes fits into one of the personas. In turn targeted political messages, relevant to each persona, are composed and directed toward a cookied browser or email address.

From digital political ad firm to data broker—and back...

Campaigns and outside groups typically either use their own databases—of registered voters listed by district—or they rely on their party or microtargeter, which also possess and add value to microtargeting in the form of their own frequently refreshed databases of this changing information.

Such offline lists of voters and, often, their party affiliation—taken from state voter registration rolls—are carefully mashed up with online data such as the non-name specific exhaust trail Web users leave, identifiable only by cookies that namelessly tag along as we surf the Web.

This information is further refined by matching it with databases containing specific email addresses that people use to subscribe to consumer and political Websites, and with information they post on social media. The result? The distillation of a "segment" of people with compatible opinions, interests or circumstances. Further refinements can then follow: the resulting "segment" can be sent test messages or content, and then be surveyed, providing an even deeper picture of that segment and a basis for even more targeted messages.

These sophisticated means of, in effect, listening to the political interests and consumer tastes of people online are key to modeling segments and honing messages—enhancing the targeting capability of emails sent and ads served by the microtargeter.

"You're trying to serve a particular ad, and trying not to waste impressions," says Will Feltus, of National Media, a political advertising shop that caters to GOP candidates."You buy only so many impressions and you want certain kinds of people

to view them." The trick, Feltus says, is to match email addresses and cookies with specific tracked online and voting behaviors, so you can find and message the desired audience.

Art and science ...

Feltus says the process often involves intuition—making it a kind of art as well as science. It is all about making sure that the data is fresh, relevant and correctly mashed that's critical to making sure microtargeted ads and emailed messages are effective. "There's more than one recipe for doing this," Feltus says. "But it's the actual cooking that's the hard part."

National Media—like other online political ad firms such as CampaignGrid and DSPolitical—provides not only expertise, survey models and their own proprietary databases. Many firms also help to create—or create from start to finish—the targeted messages needed by their clients.

Microtargeters also work with third parties—combining their data and their clients' data to be sent out and sorted with vast stores of data held by Big Data brokers, such as Acxiom, Experian or BlueKai. For most applications, these data firms are entrusted to provide powerful targeting information—combining their offline and online data with the microtargeter's, while stripping out private, name-specific datasets. "PII" is unnecessary in the case of targeting an ad or an emailed message; the goal is simply to get the right ad or emailed message to the right audience. Individuals are addressed by name only when they have opted in, and volunteered private information—the norm for those targeted with a message who have previously donated funds online to specific campaigns or parties, for example.

In this way, the microtargeting process can simultaneously respect privacy and be effective. The message—whether ad or email—need not be connected with a particular name, but only a certain email address or cookie. That email address or cookie matches a nameless person whose voter registration file and online exhaust reveal them to be someone *likely to respond positively* to a particular ad or communication—one, in fact, crafted with them in mind.

Reaching the intended audience

Rich Masterson, CEO of the GOP political microtargeting firm CampaignGrid, emphasizes
that in microtargeting you are not buying ads on a site—you are buying the audience you want *as that audience moves from site to site.*

Microtargeted ads for political purposes are part of a new norm of buying a qualified audience, rather than buying on qualified websites.

"There has been a fundamental transformation of the online advertising market—everything has become inverted. You used to buy on a qualified site, and you hoped that qualified customers would go to that site. It was site first, and audience second," Masterson explains. "You no longer buy a site and hope you find that audience. Instead you advertise to a specific target audience—and you only buy on those sites when that audience shows up."

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From Data-mining to data-mashing ...

Political microtargeters send over their data—with all PII removed or coded—to large databrokers to get email addresses and other data that matches the files, according to Joel Neubert, director of sales for Acxiom Government Solutions.

"We see if we can't just get a match on the people that they send us," Neubert tells IAB. "We go ahead and append that data to those files—based upon all of the governing rationale and the legal parameters."

"Then we secure those files, zip them back up and send them back over to the committee [or other client]," Neubert explains. "So now our client can say, 'Now I know more about these constituents or voters, and I'm going to analyze my results to impact those voters later—by dropping some direct mail, or sending an email—or by soliciting a donation.'"

"The point is that they are targeting these folks," Neubert says, "So, they can have a better understanding about who is going to come down where on a political issue, and who will donate."

Digital political ad firms use Acxiom and other large data brokers. But they also use other "match partners" in the form of content websites, as further means to target messages.

"We say, look, if somebody on our list is also on your registration, would you drop a cookie for us?" Masterson says of such match partners. "On that cookie, we have the person's gender, zip code, congressional district that they're in, state district that they're in—we have 18 attributes on it."

By mashing up outside Big Data with his company's 180-million strong voter file, Masterson says he can give campaigns just about any specific demo they could want—"Republican mothers who drive SUVs in the Pennsylvania 13th congressional district," he offers as an example. Other microtargeting firms—Republican and Democratic—also cite strong and up-to-date voter files as being an important part of how they provide enhanced targeting capabilities to clients.

Politically sensitive data means one-party firms ...

Another standout feature of microtargeting firms involved in politics is that most work for candidates of one major party or the other—but not both. Beyond the competitive nature of partisan politics, there's a difference in the basic business and workplace culture, too.

Put starkly: "The political space has a moat around it," Jim Walsh, CEO of the Democratic political ad targeting firm DSPolitical, says. "It's 50 feet deep—and full of oil—and on fire!" Because of this guardedness, Walsh says, to succeed would-be political microtargeters from outside this community must at the very least build partnerships with known firms that are experienced in the business.

What is fueling the microtargeting boom?

Unlimited funds ...

The market for online political ad spending in all federal contests in the 2008 presidential cycle was $20 million-plus, with the 2012 cycle predicted to reach $160 million or more—600-plus percent growth

The 2010 *Citizens United vs. FEC* Supreme Court decision and a subsequent federal appeals court case, *Speechnow.org vs. FEC,* have allowed, for the first time since 1907, unlimited political ad spending. Specifically, *Citizens United* made it legal for corporations and unions to make unlimited donations to groups explicitly backing or opposing candidates for federal office. *Speechnow* legalizes the creation and use of politically active "super pacs" and 501(c)4 organizations—"social welfare" groups—to spend directly to influence the political process. Prior to these precedents, only the candidates' campaigns themselves could explicitly advertise for or against a named contender in a race—outside groups were forced to stick to other, less direct forms of political advertising known as issue ads.

Though unlimited funding garnered in part by microtargeted ad campaigns has strengthened deep-pocketed donors and their influence in the current electoral races, microtargeting at the same time has empowered a plurality of new and different voices—because microtargeting provides new capability to target niche causes that various interest groups have coalesced around. With microtargeted advertising, these—sometimes single-issue—voters are targeted by various types of political advertisers—by everyone from small-spending grass-roots interests and state candidates all the way up to big-spending national campaigns and outside groups.

Under these circumstances, for the first time in a presidential election both major candidates have opted out of taxpayer funding assistance for the general election season—and the spending limits that would come with it. And with no limits or disclosure requirements on money to certain types of outside groups, both candidates are backed by a flood of funding. The world of Web-based political advertising is on track to reach multiples of the size it was just four years ago—and over time it is clear that internet political advertising will gain increased standing alongside broadcast.

By June 2012, fundraising by the presidential campaigns and allied outside groups had surpassed $1 billion, with predictions that by November it would pass the $3 billion mark, and an overall spend in all contests (federal, state and local) to approach $10 billion.[2] The vast majority of the funds spent on the presidential race will be spent on TV, radio and internet advertising. The nonprofit Center for Responsive Politics, which monitors campaign fundraising and spending, reported that by the end of August approximately $51 million had been spent on internet media in the presidential race. This is regarded by some industry sources as a very conservative estimate.

"The best you can say is that 'at least $X million'—as we have listed—has been spent on online ads, and perhaps a lot more," said Bob Biersack, former data guru for the Federal Election Commission and current senior fellow at CRP.[3]

Polarized public ...

Microtargeting is playing a leading role in all three basic goals of political messaging— fundraising/recruiting, persuasion and turnout

Increasing polarization and a nearly evenly split voting public means that to win the presidency, it is critical for candidates to use the latest and best tools, both to mobilize decided voters and to convince a shrinking pool of undecided voters.[4] Recent tracking polls show at most 8 percent of voters remain uncommitted in this presidential race, around one-third to one-half fewer than at this point in the 2008 election. In July 2012, former Clinton advisor Paul Begala wrote in *Newsweek* that by his calculations, the number of *relevant* undecided voters—those who live in closely-split swing states—number just under 1,000,000, total. Political ads and emails crafted and sent with the help of microtargeting are playing a leading role in all three basic goals of political messaging—fundraising, persuasion and turnout. But it is to reach this tiny sliver of the American electorate—undecideds living in swing states—that online microtargeted messages are especially being marshaled.

Trending toward online ...

Some political experts emphasize that the growth spurt in online political ad spending is less about Supreme Court decisions and more about a long-term trend—one that won't reverse even if those decisions do. "It's growing on its own,"

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[2] News stories on this include: "Forget $1 billion, the $3 billion campaign is here, CNN 6/25/12. http://politicalticker.blogs.cnn.com/2012/06/25/forget-1-billion-the-3-billion-campaign-is-here. Super PACs Could Drive Total 2012 Election Spending to $9.8B," AdAge online, 3/7/12. http://adage.com/article/campaign-trail/total-2012-election-spending-hit-9-8b/233155/

[3] As of 8/26/12, for example, the CRP web pages devoted to the presidential contest listed approximately $50 million spent on "online media" in 2012 as well as a further $100 million on "miscellaneous media," some likely also spent online. Disclosures often do not break out online expenditures—among others—in a clear manner, Biersack explained in a 8/21/12 interview with IAB.

[4] "The disappearing undecided voter," Reid J. Epstein, Politico, 8/9/12. (http://www.politico.com/news/stories/0812/79504.html). Epstein emphasizes that with fewer undecided voters to court, both sides of the presidential contest are devoting more money and effort to strategies designed to raise turnout among likely voters who have a preferred candidate. However, other experts—including several interviewed for this report—note that with margins in swing states projected to be very close, in addition to such a "turnout strategy" it must remain a goal of both camps to find and persuade remaining undecideds to vote for their candidate. Microtargeted media—paid and viral—can be used to find and message such potential voters. Frank Newport, editor-in-chief of Gallup, and numerous other experts and news articles, address this other side of the issue—noting the great importance of undecideds in past close elections such as the present one. "Washington Journal," CSPAN-TV, 8/31/12 (http://c-spanvideo.org/program/Undecide).

Michael Cornfield—a political scientist, columnist for *Politico*, and author of *Politics Moves Online*—tells IAB. "As more people are online and more people are using social network platforms like Facebook, Twitter and Google-plus, the market and targetability of Web ads increases. So, campaigns spend more and more of their budgets on Web ads,"

"I think that everyone anticipates this is the one area where growth will be most significant over time," Biersack said of online's future. "If anything, some people are surprised that it's gone more slowly than they expected—there is still so much spending on television."

The reason, Biersack says, is that political campaigners are extremely cautious. They continue to put the lion's share of their resources into television ads, because television ads have historically been the biggest performers.

Just about all political observers note that TV at present remains the best place to reach uncommitted voters. "TV is still the best place to get them in large numbers," says Colin Delany, founder of Epolitics.com blog and a columnist for the definitive campaign journal, *Campaigns & Elections*. "And it's hard to dominate the online media environment the way you can by buying up TV ads in a market."

Finally, some experts note that there is a perception—perhaps unfair—that making online ad buys is complicated. "It's one reason clients often work with ad-buying firms that specialize in online ads," Delany says.

For all of these reasons, while presidential campaign organizations are vastly increasing online ad spending this cycle, disclosures indicate they are reluctant to take anything away from television.

... = Takeoff in microtargeted political ads online

Political guru and University of Virginia political science professor Larry Sabato says that political division, troughs of new post-*Citizens United* money entering the fray and—most of all—growing online political participation linked to new internet-based campaigning methods are driving a robust spend that will continue through November.

Television ads, in dollar terms, remain the most popular means of political messaging—in part because TV has unique uses, but in part due to habit and a perception that online ad buys are complicated.

"While it's not an earth-shattering observation, the biggest factor in web-based politicking is that there is just more of it," Sabato said. "The Obama campaign pioneered many new methods for involving people in its 2008 effort and the 2012 batch of candidates have taken those lessons and run with them. There are more Web ads, 'viral videos,' and social media to entice supporters and potential supporters"

"Obviously, the goal is to get voters to click on links leading to candidate websites, to learn more, volunteer, and get involved—or to fundraising websites, to get donations," Sabato added. "In a sense, the increase in internet media means that there is more and more honey to attract the bees, some of whom are politically active while others are dormant and waiting to be."

"Unsurprisingly, future campaigns will probably use internet advertising even more than they do now," Sabato said. "Nonetheless, TV is still king for the time being, [and] one of the principal goals with web ads is to gain earned media on network and cable news outlets. If you have a notable ad running on YouTube or your website, television networks will want to show it as a part of their campaign coverage."

"It's hard to say when the internet might overtake television," Sabato concluded. "Perhaps when younger generations get older and my generation dies off!"

Privacy issues

Online political messages, including targeted ads—except where permitted and preceded by a voluntary opt-in such as when a person has already donated and identified themselves—are not matched to named, identifiable individuals. Yet in the political space just as in the consumer space, controversy over privacy concerns has cropped up. Some familiar voices have expressed their concerns.

The Annenberg School for Communication, a leading academic concern reporting on all aspects of advertising, in July reported that in a recent nationwide survey, 86 percent indicated that they did not want to be served "political advertisements tailored to your interests."

Joseph Turow, a professor of communications and lead author of the report, said. "Political campaigning is moving in a direction starkly at odds with what the public believes should take place." Turow argues that if targeted ads—and what he calls "deep discomfort" over it—persist, such a situation could "erode citizens' beliefs in the authority of elections."

The concerns reflected in the results of the Annenberg survey—and of online privacy advocates, more generally—may reflect in part unease with new and unfamiliar technology. The IAB is pressing for creating common language and best practices in order to create increased transparency in digital transactions in targeted advertising.

"People involved in political advertising are now in the same boat as the consumer advertisers," Michael Zaneis of the IAB told *Campaigns & Elections.* "The privacy concerns are front and center." While acknowledging the concern, the IAB advocates a program of self-policing by industry, and finding compromise on the issue.

Microtargeting relies on the mashup of online data along with offline consumer and voter data— sorting processes in which political microtargeting ad firms blind or strip out privately identifiable data (PII). Microtargeters must continue to address privacy concerns, and work to develop and meet best practices that will facilitate growth of this field.

Anonymized information, anonymous—yet targeted—audience

"All of the people that we [message] are anonymous to us," Andy Hunn, COO of political and consumer advertising company Resonate Networks, tells IAB. "We don't care who they are, specifically—we just want good examples that are representative of the online population."

"It's so that we can go from what we know about them from surveys, and their online behavior," Hunn continues. "Our algorithms interrogate all that data and tell us where the best place to reach these people is—let's call it, 'whatever.com.' From this kind of information, we can construct the media—and who it reaches—in an optimal way."

It starts with each party stripping out any private information before matching the desired email and cookies to the voter lists or other data, to maintain privacy while permitting accurate service of targeted ads and targeted political emails.

"First of all, when we take our voter file, and we send that off to a match partner, we first blind them to anything other than the generic data," CampaignGrid's Masterson says "So, there can be no data breach at the match partner level, because we don't share what the data fields are all about."

"It's double-blinded," Masterson continues. "We blind the attributes going out to the match partner—except for the personally identifiable information (PII)—so that they can find a match. Then, when we get the cookie match back, the match partner blinds the personally identifiable information to me."

"Even if the FBI knocks down my door and asks, 'Who clicked on the ad in Brooklyn?' I can't tell them—not because I don't want to, but because it's engineered in such a way to not be able to do that, to comply with privacy laws," Masterson says.

Restrictions on unauthorized use of data

Masterson says the contracts and the data exchanges involved in his business are very restrictive—and specifically in order to prevent data theft and protect privacy. This prevents any party to a transaction from either from keeping his company's data or modeling it to create a 'synthetic file' closely mirroring that data. Any use beyond the contracted one is absolutely prohibited.

When considering privacy laws, Masterson says that, in terms of online ads, political campaigns are not interested in individuals or private information—they simply need to create ways of electronically contacting and messaging people that a political client is trying to reach and persuade.

Feltus similarly emphasizes that for microtargeted political advertising that this is an anonymous exercise, in terms of what data is important and used. His and other digital political ad firms simply want to identify pools of email addresses and web users whose online behavior and other interests indicate that a particular ad or message—served or sent out for a fee— is a good bet, and therefore a good value, for their clients.

"You use modeling," Feltus says. "You model this: a set of web users and their opinions. And you go out and you try to match that. That's what microtargeting is."

Privacy concerns are paramount in the industry, but some of the most important data used in the process is publicly available.

"Some of the information used by microtargeters is not private," notes Rep. Gerry Connolly (D-Va.) "Whether you voted or not is public information. Whether you are registered to vote is public information. Whether you've participated in Democratic or Republican primaries over the years is public information."

"Other kinds of information is private—and in my view ought to stay private," Connolly continued. "But this can quickly get us in gray areas. Moving forward, I hope, we're going to have to try to find some rules of engagement that respect everyone's privacy—and their right to privacy."

As the use of offline and online Big Data to improve microtargeting continues to advance, technology and privacy experts will continue to collaborate to ensure that political and consumer data gathering do not run afoul of state and federal privacy laws. IAB will remain a key partner in crafting best practices that should achieve the commonsense goal espoused by Rep. Connolly—one that respects privacy.

Conclusions

In this report, we've focused on the presidential race—and how microtargeting has come to occupy a prominent, and possibly determinative, role in this and future contests. We've described the rapid growth in the use of Big Data and microtargeting in digital political ads—and we have heard from political scientists, technicians and principals in the political microtargeting business about the techniques employed and the reasons behind the industry's growth. We've also offered the best range of figures available at this time on the current and projected volume of online political ad buys.

The market for campaign advertising in 2012, across all contests and platforms, is estimated by industry sources to approach $10 billion. The presidential race should account for roughly one-third of the overall number—about $3 billion. The online portion across all contests, though hardest to gauge, is projected to be in the $160 to $200 million-plus range— a small piece of the pie but at least six times the $20 to $30 million estimated to be spent online in 2008. Despite some limitations on these financial estimates regarding political microtargeting—a business dominated by small, closely held firms—we have enough information to venture several useful conclusions.

There are multiple terms for political microtargeting— including targeting, segmenting, and others—as well as multiple terms for many parts of the process. Arriving at a common nomenclature could facilitate more transparency and ease of transitioning into microtargeting for some political clients.

Online advertising played a role in the 2004 and 2008 election cycles. But now, in 2012, online political advertising buys have grown enormously and for the first time microtargeting has become a crucial, go-to tool for both major presidential candidates and every outside group, for several reasons. First, the presidential contest is attracting more spending—and the present contest is very close and there is a need both to drive a large pool of decided but unmotivated voters and to find and persuade a dwindling number of undecided voters. Second, of course, as the voting public spends more time online microtargeted online ads become a better tool to address specific messaging needs—helped, according to industry sources, by increasingly detailed and economically accessible Big Data that makes the practice increasingly accurate. Third, microtargeting is on the rise in each of the three main functions of campaigns—recruiting and fundraising, persuasion as well as get-out-the-vote efforts.

Our work here invites further exploration of some longer-term questions: What

new angles will microtargeting take—and how is the pressurized world of political advertising leading to innovations in this important niche business, and where might those innovations lead? What legal and privacy issues are facing the industry, and how will they be addressed in future? IAB will be exploring these issues in upcoming reports and online content pieces.

Nathan Abse is a writer and journalist, who has produced content for the Washington Post, *the* London Independent, Foreign Policy, Business Briefings *and other publications. He attended the University of Virginia and the London School of Economics, and currently writes for 1105 Media.*

Appendix A: Methodology

This paper was based on interviews with more than 15 experts, including principals and technical specialists at online political advertising businesses—microtargeters—as well as political scientists, data brokers and journalists covering this field.

Appendix B: List of sources consulted (in order of appearance in text)

Rep. Gerry Connolly, D-Va., member, Oversight and Government Reform Committee

Ken Goldstein, VP ad consultancy Kantar Media's Campaign Media Analysis Group (CMAG), a tracker of political ads on radio and TV and the Internet

Jake Rosen, digital and social strategist, Fleishman-Hillard, multinational PR and political consulting firm

Will Feltus, VP of National Media, a GOP political advertising firm

Ravi Singh, CEO of online campaign software website and political ad firm ElectionMall

Rich Masterson, CEO of CampaignGrid, a GOP political digital advertiser and microtargeter

Joel Neubert, Director of Sales for data firm Acxiom's Government Solutions unit

Larry Sabato, political scientist, Director of the Center for Politics at the University of Virginia and nationally renowned media source on elections, and author of Pendulum Swing

Michael Cornfield, political scientist, columnist for Politico, *and author of* Politics Moves Online

Paul Cimino, CEO of Brilig, a cooperative data marketplace and exchange for display ads

Jim Walsh, CEO of the Democratic political ad targeting firm DSPolitical

Travis Ridout, government and public policy professor at Washington State University

Bob Biersack, Senior Fellow, Center for Responsive Politics & former spokesman and data expert at the Federal Election Commission.

Colin Delany—founder and chief editor of Epolitics.com and columnist for Campaigns&Elections

Andy Hunn, COO of Resonate Networks, an online political ad firm and microtargeter

Michael Zaneis, online privacy expert for IAB

Appendix C: List of political microtargeters

The following is a list of just some of the active players in the political microtargeting market. Political campaigns and outside groups also use numerous other microtargeting operations and databases—notably the Catalyst database developed by the Democrats and VoterVault database developed by the Republicans, as well as many other entities not on this list.

Bully Pulpit Interactive

CampaignGrid

DSPolitical

Grassroots Targeting

National Media

Precision Network

Strategic Telemetry

TargetPoint Consulting

Targeted Victory

From:	Jeffrey Chester
Sent:	Saturday, October 20, 2012 12:32 PM
To:	Kestenbaum, Janis
Cc:	Angela Campbell; Laura Moy; Jessica Wang; Jordan Blumenthal
Subject:	online brand safety expands, FYI

IAB Expands QAG – to Include All Buyers & Sellers of Digital Media, Delivering Brand Safety across Digital Transactions

Otilia Otlacan | October 10, 2012 | 0 Comments and 1 Reaction

3

Evolves Program Beyond Networks & Exchanges to Include All Major Stakeholders in the Digital Supply Chain

Accuen, Adap.tv, Brightroll, Cadreon, CBS Interactive, Data Broadcasting Group, DataXU, Google, GroupM, Microsoft, Mojiva, NBCUniversal Audience Platform, Pubmatic, Rocketfuel, SpotXchange, Telemetry, TubeMogul & Valueclick Join QAG 2.0 Task Force

NEW YORK - The IAB's Network and Exchange Committee launched the Quality Assurance Guidelines (QAG) compliance program on April 4, 2011. This program provides brand safety assurances to advertisers that their ads will not appear next to inappropriate content. At its annual MIXX Conference & Expo in New York, the Interactive Advertising Bureau (IAB) announced that it is building upon the program's success and expanding QAG beyond networks and exchanges to include marketers, agencies, DSPs, SSPs and trading desks to establish greater marketplace trust on all sides.

"A rigorous brand safety program that unites the entire interactive ecosystem is crucial to establishing a trusted environment to conduct digital transactions," said Patrick Dolan, Executive Vice President and COO, IAB. "Companies that participate in this program will be recognized as operating at the highest industry standards, thereby providing confidence to marketers to invest more in digital advertising."

IAB has engaged The 614 Group, a global digital management consultancy founded by Rob Rasko and Adam Brothers, to head the initiative. Rasko and Brothers have extensive experience in digital media, and Rasko was one of the original authors of the IAB Quality Assurance Guidelines.

Under the direction of the IAB Ad Technology Council and Networks & Exchanges Committee, The 614 Group will oversee and steer the QAG 2.0 Task Force, currently comprised of representatives from Accuen, Adap.tv. Brightroll, Cadreon, CBS Interactive, Data Broadcasting Group, DataXU, Google, GroupM, Microsoft, Mojiva, NBCUniversal Audience Platform, Pubmatic, Rocketfuel, SpotXchange, Telemetry, TubeMogul and Valueclick.

"The industry needs a uniform set of policies that speak to the buy and sell-side, if we want to effectively and efficiently reach target audiences," said John Montgomery, COO, GroupM Interaction, USA. "From online publishers to trading desks, we need a cross industry set of guidelines that isolate the issues and make implementation simpler. In turn, this type of cross-industry compliance program would lead to higher revenue distribution to compliant companies and from a GroupM perspective, we would embrace it fully."

"All of us across the digital media and marketing ecosystem need to work together to remove barriers to growth and quality enhancement," said Teri Gallo, Vice President, Programmatic Practice at Mediabrands Audience Platform, Cadreon. "Working with IAB to develop a structured compliance program that addresses brand safety issues is paramount to moving the industry ahead. The QAG program for networks and exchanges was a great start, but now is the time to take the program broader and deeper."

"This is a timely and welcome opportunity to evolve the QAG initiative to drive safety and transparency to the marketplace," said Rob Rasko, Managing Partner and Founder, The 614 Group. "One of the core goals is to make the guidelines more closely mirror the way people currently do business, which will ultimately lead to greater adoption of the program and benefits for all. We believe that the QAG 2.0 Task Force will enable the business operations and management teams of all participants in the ad pipeline to reduce overall brand safety risk and better position their organizations to attract and retain larger revenue streams."

To learn more about the QAG 2.0 Task Force, please email qag@614group.com, and to get information about the current QAG program, go to www.iab.net/QAG.

http://www.adoperationsonline.com/2012/10/10/iab-expands-qag-to-include-all-buyers-sellers-of-digital-media-delivering-brand-safety-across-digital-transactions/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+adops+%28Ad+Operations+Online%29#.UILRUBgQxLw

From:	Jeffrey Chester ███████████████
Sent:	Friday, October 19, 2012 9:17 AM
To:	Kestenbaum, Janis; Engle, Mary Koelbel
Cc:	Angela Campbell; Laura Moy; Jessica Wang; Jordan Blumenthal; Alan Simpson; Kathryn Montgomery
Subject:	online brand safety compliance standards
Attachments:	JICWEBS CV Product Principles V1 2012.pdf

Note that the brand safety technologies are also being independently tested by the Joint Industry Committee for Web Standards (doc attached)

AdSafe Media Content Verification and Brand Safety Capabilities Certified by ABC

MARKETWIRE

Press Release: *AdSafe Media – Mon, Jun 11, 2012 9:37 AM EDT*

- NEW YORK, NY--(Marketwire -06/11/12)- AdSafe Media today announced that it is one of four content verification (CV) tools to receive a public certificate of capability from ABC (Audit Bureau of Circulations), the industry body for media measurement.

ABC sought to review the capabilities of CV tools in the industry. The goal was to increase transparency into the ability of CV technology to reduce the risk of misplaced advertising. AdSafe Media was one of eight companies to submit its technology for review. **Each was tested for its ability to block, in real-time, any content deemed unsuitable for the ad campaign, including rival brands and word associated with obscenity, illegal content, violence, spyware, etc.**

AdSafe's content rating system is the only solution that **automates the brand safety, viewability, context and engagement potential of web pages on the individual page level**. It goes beyond verification with a proactive solution that blocks ads from appearing on inappropriate pages, rather than simply reporting the problem. Since launch in 2009, AdSafe has led the **digital advertising industry in moving the formerly defensive nature of brand safety into a new position of predictive ad decisioning**....For more information or to download the Content Verification Technology Review, visit: http://www.abc.org.uk/Products-Services/Processes-Systems/Content-Verification-CV/.

http://finance.yahoo.com/news/adsafe-media-content-verification-brand-133700212.html

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The Principles by the standards group
Joint Industry Committee for Web Standards

1

Content Verification (CV) Products

Version 1 2012

Issued January 2012 JICWEBS Content Verification Product Principles JICWEBS CV Product Principles V1 2012 1 © JICWEBS 2012

JICWEBS Content Verification (CV) Product Principles.

This document sets out 10 principles that have been approved by JICWEBS. The principles have been developed following our testing of 8 CV Products which took place in October-November 2011 and replace those principles put forward in May 2011.

Note – principles are set out below in **bold** with supplementary information in *italics*

A CV Product will be tested against the following principles:

1. **Block the serving of advertising on to pages which contain content, deemed to be inappropriate by the advertiser, in HTML source code.** *Detect inappropriate words on a web page or the code of that web page before or after the ad appears.*

2. **Block the serving of advertising on to pages which contain words in content delivered via a linked file deemed to be inappropriate by the advertiser.** *When the page appears in the browser it displays content pulled from another source which may be unrelated to the expected content on the page.*

3. **Register changes in page content and then block the serving of advertising on to pages which contain content, deemed to be inappropriate by the advertiser, in real time.** *A page which has rapidly changing content such as a Forum.*

4. **Block the serving of advertising on to domains and sub-domains, deemed inappropriate by the advertiser.** *An inappropriate text string in the domain or sub-domain name such as http://inappropriate.com OR http://inappropriate.safesite.com*

5. **Block the serving of advertising on to pages which contain words in th e URL, deemed to be inappropriate by the advertiser** *An inappropriate text string contained within the URL such as http://normal.com/okay/inappropriate.aspx)*

6. **Block the serving of advertising on to aliases of an URL or domain, deemed to be inappropriate to the advertiser.** *A URL may look like http://normal.com/safe.aspx but the page that is displayed is http:// inappropriate.com/unsafe.aspx*

JICWEBS Content Verification Product Principles JICWEBS CV Product Principles V1 2012 2 © JICWEBS 2012

7. **See through iframes and block the serving of advertising if keywords or URLs, deemed to be inappropriate, to the advertiser, are detected.** *Inappropriate words may be contained within the iframe which is embedded on a web page and the ad is served on the page, or vice versa.*

An approved CV Product will also be able to serve ads correctly in equivalent scenarios that contain only appropriate content. In addition, the CV Product will:

8. **Operate consistently in allowing or blocking advertising when JavaScript is disabled.** *If the product requires JavaScript to be enabled by a browser for it to make a decision as to whether the content is appropriate or not, does it block the serving of ads if JavaScript is disabled?*

9. **Be capable of incorporating any list of keywords or URLs, deemed to be inappropriate by the advertiser, into the CV product within 2 working days of that new list being produced.**

10. **Be configurable to block the serving of advertising to any URL not previously checked as safe, until the status is known, if identification of content is not in real time.**

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JICWEBS
www.jicwebs.org

Joint Industry Committee for Web Standards

JICWEBS

Product Principles

Content Verification (CV) Products

Version 1 2012
Issued January 2012

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    When the page appears in the browser it displays content pulled from another source which may be unrelated to the expected content on the page.

3. **Register changes in page content and then block the serving of advertising on to pages which contain content, deemed to be inappropriate by the advertiser, in real time.**
    A page which has rapidly changing content such as a Forum.

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    An inappropriate text string in the domain or sub-domain name such as http://inappropriate.com OR http://inappropriate.safesite.com

5. **Block the serving of advertising on to pages which contain words in the URL, deemed to be inappropriate by the advertiser**
    An inappropriate text string contained within the URL such as http://normal.com/okay/inappropriate.aspx)

6. **Block the serving of advertising on to aliases of an URL or domain, deemed to be inappropriate to the advertiser.**
    A URL may look like http://normal.com/safe.aspx but the page that is displayed is http:// inappropriate.com/unsafe.aspx

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9. **Be capable of incorporating any list of keywords or URLs, deemed to be inappropriate by the advertiser, into the CV product within 2 working days of that new list being produced.**

10. **Be configurable to block the serving of advertising to any URL not previously checked as safe, until the status is known, if identification of content is not in <u>real time</u>.**

The objective of ABC's test programme is to verify whether a CV Product is capable of meeting claims in relation to some or all of the principles above. For the purpose of ABC testing note:

1) *Capable* is defined as once configured; the product consistently blocks or serves ads under different scenarios during the period of testing.
2) *Blocking, in real time* refers to the decision to serve or not serve the ad and not any spidering or pre-classification activity.

ABC Test Programme Caveats:

ABC's audit opinion confirms only that the CV Product is capable of preventing ad delivery when **configured correctly** (with certain exceptions as stated below) on Inappropriate Content, but does not guarantee that no ad will ever be served onto an inappropriate site when the CV Product is used in real life. The following specific caveats must also be noted:
- Testing is at a point in time and on a limited scale.
- ABC will test that the CV product hasn't been configured to block serving of ads in all tests by default

- The test programme does not verify the scalability of the product.
- The context of testing does not fully reflect real life conditions such as multiple campaigns running in multiple sites.
- The test programme does not verify implementation times required in real life.

- The test programme only verifies that the product blocks on the basis of HTML text and URLs. It does not verify that the product blocks all content formats, particularly non-HTML (e.g. AV content, images etc.).
- The scope of ABC's opinion is limited to English-language content.
- Testing is carried out on **one** specified version of the CV product.
- Testing does not examine any impact that the CV product may have upon campaign delivery.

Joint Industry Committee for Web Standards

From:	Jeffrey Chester ~~████████████~~
Sent:	Thursday, October 18, 2012 10:11 AM
To:	Ramirez, Edith
Cc:	Kestenbaum, Janis
Subject:	one addition

Commissioner:

Apparently I said during our COPPA meeting that the industry always lies. What I meant to say is that they often tell policymakers one version of what they are doing, and speak more candidly about what's going on among themselves. As you also may know, I am working on Do Not Track. The DAA asked in Amsterdam that all advertising and marketing be made exempt from any privacy safeguards (I helped get 2 NYT stories on this issue). The industry also have said at the W3C there are no harms at all from what they do. It was in that spirit that led me to generalize about their candor.

I blogged about the W3C meeting here, btw: http://www.democraticmedia.org/us-ad-lobby-tries-hijack-do-not-track

Safe travels.

Jeff

Jeffrey Chester
Center for Digital Democracy
1621 Connecticut Ave, NW, Suite 550
Washington, DC 20009
www.democraticmedia.org
www.digitalads.org
202-986-2220

1

O'Connor, Alyssa

From:	Jeffrey Chester ████████████
Sent:	Wednesday, October 17, 2012 10:57 AM
To:	Ramirez, Edith
Cc:	Kestenbaum, Janis; Engle, Mary Koelbel
Subject:	Google video: brand safety

http://9to5google.com/2012/10/09/new-doubleclick-ad-verification-tool-enables-smarter-media-buying-video/

I forgot to send this.

From:	Jeffrey Chester████████████████
Sent:	Wednesday, October 17, 2012 8:25 AM
To:	Ramirez, Edith
Cc:	Kestenbaum, Janis; Angela Campbell; Laura Moy; Alan Simpson; Joy Spencer; Kathryn Montgomery
Subject:	Thanks and also FYI, follow-up
Attachments:	FPF & WPF Mobile App Ecosystem Webinar Briefing.pptx; IABMobileLocalBuyer'sGuide.pdf; os_dfa_advertification_october2012.pdf; Amplify_BrandSafety2.pdf; Admeld_Private_Exchange_Whitepaper_C.pdf

17 October 2012

Dear Commissioner Ramirez:

My colleagues and I thank you and Janis for taking the time to meet with us and, as always, raising key issues.

I have attached several documents on subjects we discussed yesterday. One is the powerpoint developed by Future of Privacy Forum/World Privacy Forum for its recent NTIA-sponsored mobile app briefing (something I asked NTIA and the industry to do, to put on record what really goes on in the "app" system). I suggest you look at pages 8, 4, 21, 24-28 especially, which discusses the app data collection system.

   I will send some additional information on the mobile app market soon, including on the role of advertising and the distribution process.

   But I have attached an IAB document on local mobile advertising, because it illustrates one of the issues. As you know, we are witnessing an explosion of highly localized mobile marketing ($42b by 2015), via mobile phones and narrowly-geo-targeted services. Page 8 describes some of the ways a user can be tracked. We have already documented how marketers are targeting youth and others through such techniques as "geo-fences," which classify people and geography in a neighborhood in a very discrete targetable manner. Ensuring app and mobile related safeguards for the child geo-targeting environment is key.

On the issue of "Brand Safety" systems, the online ad industry has undergone a robust development of tools to deliver the transparency and accountability that most advertisers (and leading online publishers represented by the OPA) now require. Advertisers want and can control where their ad/marketing appears--the exact sites, narrow classes of users or individuals, ad placement, etc. This video from one of the leading Brand Safety companies, Adsafe, provides an overview: http://vimeo.com/36366927#at=0

Adsafe is just one of a number of companies providing these services, which are incorporated in Google and other platforms. I've attached the Google/Doubleclick brochure describing its similar service.
Also one document from Amplify that illustrates how advanced semantic webpage analysis is being used to help advertisers make informed ad targeting decisions. In addition, this link shows how the technology is used by a leading ad network: http://www.collective.com/media/brand-safe-content

Admeld, a RTB platform, has offered brand safety since 2010. The attached paper discusses the growing role of "private exchanges" where leading online sites control their ad inventory, what's placed on its site, etc.

Please let us know any specific questions or additional information that might be helpful. I will send the mobile app information soon.

Regards,

Jeff

PS: The scale below is also useful as an example of what is being used today.

http://adsafemedia.com/our-technology/rating-categories

The following provides an overview of the general definition for the level of brand safety that correlates to each AdSafe Content Rating range.

AdSafe Score Range	Likely type of content on the page
>750	Generally acceptable content for all ages and audiences, does not typically contain anything offensive in nature and/or theme.
500-749	Moderate content, typically acceptable for brands. However, caution needs to be given to subjective nature of content (e.g., alcohol, tobacco or partial nudity, such as swimsuits).
250-549	Graphic content, typically moderately offensive but not illegal. High probability that this is offensive for leading brands/advertisers.
<249	Graphic content, usually explicit with high degree of offensiveness, possibly illegal content types (e.g., child pornography)
Not Permitted	Content typically explicitly unacceptable for brand advertisers. (e.g., hate speech, spyware/malware, illegal activity or content)

A Brief Overview of the Mobile App Ecosystem

September 13, 2012

FPF

FUTURE OF PRIVACY FORUM

WORLD PRIVACY FORUM

Presenters

- Pam Dixon, Executive Director, World Privacy Forum

- Jules Polonetsky, Director and Co-Chair, Future of Privacy Forum

- Nathan Good, PhD, Chief Scientist at Good Research

- Ron Soffer, Independent App Developer, former app developer for WebMD

- Adam Towvim & Matt Tengler, VP of Business Development & Product Director at Jumptap

- Lia Sheena, Legal & Policy Fellow at the Future of Privacy Forum

Agenda

- Mobile Ecosystem Chart

- App Business Models

- Mobile Web Browser Overview

- Mobile Application Ecosystem

  - Data that can be Collected

  - Technical & ToS Permissions

  - Notice & Design Considerations

  - More on types of data: Location, Photos, & Contacts

  - Identifiers & Tracking

  - Tracking & Opt-out Options

- Questions

The Mobile Ecosystem

What is potentially involved in a for-profit mobile app

FPF
FUTURE OF
PRIVACY FORUM

App Business Models

PAID DOWNLOADS

FREE, AD SUPPORTED

FREEMIUM; IN-APP COMMERCE

FREE; IN-APP REFERRALS

Remove Ads?

Would you like to remove the ads for $2.99? The extra space will be used for larger fonts and images. Ads will be removed on any device linked to your Apple ID.

Remove Ads

I've Already Bought This

No Thanks

CC. OR VERLANDER?
FIND OUT WHO HAMILTON CHOSE
IN THE FREE DIGITAL MAGAZINE. SWAG

Earn Awesome Points

Earn Awesome Points | Offers by Tapjoy

Sign up for Tapjoy
[123] Complete a quick action.
6 Awesome Points / FREE

24 Hour Fitness: Free 7 Day Pass!
[123] Complete a quick action.
10 Awesome Points / FREE

Delicious Diabetic Desserts - FREE Recipe Guide!
[123] Complete a quick action.
2 Awesome Points / FREE

Sign up for Netflix!
[123] Complete a quick action.
106 Awesome Points / FREE

Sign up for Gamefly.com
[123] Complete a quick action.
127 Awesome Points

Mobile Web Browsers

- Typical Mobile
  Browser Privacy
  Controls
  - Clear cookies
  - Clear history
  - Clear local storage

- Safari
  - Default browser on iOS
  - Third-party cookie limitations
  - Clearing cookies also clears Local Storage

- Android
  - "Browser" is default; users can manually install the Chrome browser app

- Mozilla
  - Do Not Track functionality in mobile browser on Android: "Tell sites not to track me"

Native, Web, or Hybrid Apps

- Native app (iOS, Android, Java)

- Web app (HTML5)

- Hybrid App

Mobile App Ecosystem
Data Collected Can Include:

- Contacts
- Photo Library
- Videos
- Camera/Video Sensor
- Microphone
- Text Messages
- Dialer
- Calendar Items
- Location
- Reminders
- User entered info
- Social Integration features

FPF
FUTURE OF
PRIVACY FORUM

Handling of Sensitive Data

- Health
- Financial
- Children

The Apple iOS Approach

App Store Review Plus Sandboxing

- "For security reasons, iOS places each app (including its preferences and data) in a sandbox at install time. A sandbox is a set of fine-grained controls that limit the app's access to files, preferences, network resources, hardware, and so on. As part of the sandboxing process, the system installs each app in its own sandbox directory, which acts as the home for the app and its data."

- "**Important** The purpose of a sandbox is to limit the damage that a compromised app can cause to the system. Sandboxes do not prevent attacks from happening to a particular app and it is still your responsibility to code defensively to prevent attacks. For example, if your app does not validate user input and there is an exploitable buffer overflow in your input-handling code, an attacker could still hijack your app or cause it to crash. The sandbox only prevents the hijacked app from affecting other apps and other parts of the system." (iOS Developer Library)

Technical Consent/Permission Models:
Apple iOS

When does the OS automatically trigger a request for user permission before providing data?

- Location data
  - Apps that need access to location including apps with access to photos and videos
  - Triggers opt-in consent pop-up prior to use

- Access to other data without declaring in iOS5 API
  - BUT new in iOS6: app developer must request access to Photos, Contacts, Reminders, and Calendar access which will trigger opt-in consent pop-up

Location Status
Arrow icon appears when location is accessed

Welcome to yelp

"Yelp" Would Like to Use Your Current Location
Don't Allow   OK

Camera Roll

"Mixel" Would Like to Use Your Current Location
This allows access to location information in photos and videos.
Don't Allow   OK

Apple iOS

Ability to Edit Permissions & Add New Permissions

- Location Opt-in Notice
  - Access to location always triggers a pop-up consent request
  - Developer can edit and add information about the request in the description

- Developer can Optionally Trigger other Permissions, e.g. pop-up permission prior to accessing or uploading contacts onto a server

UNITED STATES

"Dragon Go!" Would Like to Use Your Current Location

This data will enable a significantly enhanced user experience, enabling things like "near me" searches for businesses, restaurant, landmarks, driving directions and more.

on't Allow   OK

Contacts

To find family and friends, Path needs to send your contacts to our server.

Don't Allow   OK

Technical Consent/Permission Models:

Google Android

Community Review Plus Per App Sandboxing

- Developer decides permissions that the app will have

- Permissions declared to user before install

- Permissions cannot be changed while the program is running, they are static

- Permissions allow for granular access and control of various parts of the phone as well as customer data

- Apps can be downloaded from the default Google Play app store or from independent app store

Setting Permissions on Android

**Actions
Permissions**

| Personal
Info
Permissions |
| Hardware
Sensor
Permissions |
| System
Actions
Permissions |

↓

**Determine
permissions
needed**

↓

**Describe
permissions
needed**

↓

**Display
permissions
to user
User chooses
to install or not**

Android Permissions: Setting them up

- Developer creates a file called a manifest that has the permissions

```
<uses-sdk android:minSdkVersion="5" android:targetSdkVersion="5" />
<uses-permission android:name="android.permission.GET_ACCOUNTS" />
<uses-permission android:name="android.permission.READ_CONTACTS" />
<uses-permission android:name="android.permission.WRITE_CONTACTS" />
```

Android Permissions
What the User Sees

Apps

P Path

Accept & download

PERMISSIONS

Storage
Modify/delete USB storage contents

System tools
Prevent phone from sleeping

Your location
Coarse (network-based) location, fine (GPS) location

Phone calls

Read contact data

Allows an application to read all of the contact (address) data stored on your phone. Malicious applications can use this to send your data to other people.

OK

Technical Consent/Permission Models:
Google Android

- Up Front Notice designed to:
  - Limit dialog boxes
  - Provide transparency on programs actions before install
  - Give the user install/don't install choice before installation
  - Be decided on before the program runs

- Security Architecture Limitations
  - Reliance on one time customer consent and user attention upfront
  - "Android has no mechanism for granting permissions dynamically (at run-time) because it complicates the user experience to the detriment of security." http://developer.android.com/guide/topics/security/permissions.html

Terms of Service Consent Rqmts

Apple iOS

- "You must provide clear and complete information to users regarding Your collection, use and disclosure of user or device data." *Section 3.3.10 of the iOS Developer Program License Agreement.*

- "If consent is denied or withdrawn, Applications may not collect, transmit, maintain, process or utilize such data or perform any other actions for which the user's consent has been denied or withdrawn." *Section 3.3.13 of the iOS Developer Program License Agreement.*

Google Android

- "If the users provide you with, or your Product access or uses, user names passwords, or other log-in or personal information, you must make users aware that this information will be available to your app, and you must provide legally adequate privacy notice and protection for those users. Further, your Product may only use that information for the limited purposes for which the user has given you permission to do so." *Section 4.3 of the Android Market Developer Distribution Agreement.*

Microsoft

- "If your app enables access to and the use of any Internet-based services, or otherwise collects or transmits any user's personal information, you must maintain a privacy policy....Your privacy policy must (i) comply with applicable laws and regulations, (ii) inform users of the information collected by your app and how that information is used, stored, secured and disclosed, and (iii) describe the controls that users have over the use and sharing of their information, and how they may access their information. You must also provide access to your privacy policy in the app's settings as displayed in the Windows settings charm." *Section 3(f) of the App Developer Agreement.*

Additional (Optional) Notifications

Adding Notice in Context outside of regular permissions

Location Services

Why does Halftone need my location?

Halftone does not use location data nor does it directly access your GPS device.

The built-in camera can automatically save a GPS location every time you take a picture so that other applications (like iPhoto, for example) can show where the picture was taken.

Because the image picker in Halftone **could** use this

⚠ Important - Can we use your contact info

We want to use your email and address to customize your experience. We will not be using it for marketing purposes.

Yes | No

Notice Design Considerations

ABC 3G   04:38 PM

Approximately
~30 characters. Default Font
Size 16-18sp

Welcome to Action Method!

Start by adding a new project
or a new action step.

Just click 'New Project' or the
'+' below.

Get started

Approximately
5-6 lines

- Screen Constraints
- Push notifications
- More than just popups, exploring alternate designs

Location

- GPS

- Wi-Fi

- Cell towers

  - Carriers and services that work
    with carriers, e.g. Locaid
    (subject to CTIA guidelines)

  - Coarse location (Android)

- Future? NFC

Contacts/Address Book

- Apple's ToS require app developers to request for access but not a technical permission yet (will be in iOS6)

- Android's ToS require app developer to notify user of personal info available to the app which is technical permission to "read all of the contact (address) data stored on your phone"

```
const ABPropertyID kABPersonFirstNameProperty,
const ABPropertyID kABPersonLastNameProperty;
const ABPropertyID kABPersonMiddleNameProperty
const ABPropertyID kABPersonPrefixProperty;
const ABPropertyID kABPersonSuffixProperty;
const ABPropertyID kABPersonNicknameProperty;
const ABPropertyID kABPersonFirstNamePhonetic
const ABPropertyID kABPersonLastNamePhoneticPr
const ABPropertyID kABPersonMiddleNamePhonetic
const ABPropertyID kABPersonOrganizationProper
const ABPropertyID kABPersonJobTitleProperty;
const ABPropertyID kABPersonDepartmentProperty
const ABPropertyID kABPersonEmailProperty;
const ABPropertyID kABPersonBirthdayProperty;
const ABPropertyID kABPersonNoteProperty;
const ABPropertyID kABPersonCreationDateProper
const ABPropertyID kABPersonModificationDateP
```

Photos & Calendar

- **Photo/Video Library**
  - Android doesn't currently have a specific permission for photo or videos; obtain access to photos and videos by requesting permission to read data from storage cards – subject to change
  - iOS triggers a location permission upon requesting access to "ALAssetsLibrary"

- **Calendar & Reminders**
  - Access to calendar on most mobile OSs, e.g. iOS, Android, and Windows
  - Cannot request access to phone reminders on iOS5, but will be able to in iOS6

Social Integration Features

- Facebook Connect
- Apple Game Center
- Twitter sharing
- Google+
- DeNa's Mobage
- Gree's Open Feint
- Papaya
- PlayPhone

Working with Third Parties

- Analytics SDK

- Ad networks SDK

- Other intermediaries

- Behavioral Advertising

- Data appending

- Exploits and abuses

What Types of Data do Ad Networks Typically Receive?

Data	App	Mobile Web	Notes
Device Type	■	■	
Operating System	■	■	
App / URL	■	■	
Mobile Network	■		When on 2/3/4G connection, IP based
IP Address	■	■	Server-to-server ad calls a challenge
Mobile Browser		■	
Carrier ID	■	■	Accessed via http headers
Device ID	■		UDID, Android ID, new iOS ASAdvertiser Manager, etc.
Location Data	■	■	Granularity varies based on user/ publisher, but access to precise geographic location only if app obtained user's consent
Ad(s) Supported	■	■	Dimensions, MRAID, VAST
Conversions	■	■	Data sharing varies across app / web

Identifiers & Tracking

- App cookies are sandboxed

- Concerns around the use of device identifiers for app tracking

- Security Mechanisms for device identifiers

  - Google AdMob requires that app developers send back hashed values of the UDID

  - Many leading ad networks now hash the identifiers they receive on Android and iOS

- Types of Identifiers Include:

  - Android ID; can be wiped upon factory reset

  - Apple UDID; linked to device, no controls to modify

    - In August 2011, Apple announced plans to deprecate UDID access

    - iOS6 provides alternative identifier that can reset by the user

  - MAC Address; linked to device hardware, no controls to modify

  - IMEI

  - MEID

  - Using iOS Pasteboard

  - Device Fingerprinting

Tracking & Opt-out Options

- Disparate identifiers = disparate opt-out solutions

- Mobile ad networks and other leading companies have begun to offer opt-outs

- No consistent and single opt-out across app and mobile web

  - Multiple steps to opt-out

  - Device identifier not easily accessible by user

  - Creating awareness of available opt-outs

- FPF lists some companies that currently provide mobile opt-outs @ **mobileprivacyoptions.org**

Tracking & Opt-out Options

Flurry opt-out

Smartphone: Select one...

Device identifier

[OPT OUT ▸]

▾

Jumptap opt-out

Jumptap.

Jumptap Opt Out

Currently, the ads you receive on this device are tailored to your interests. You can opt out by clicking the button below. However, please note the important limitations of this opt out.

[Opt Out]

Important limitations of this opt out

- If your browser's cookies are deleted, you will need to opt out again
- The information used by mobile apps to anonymously identify users is different from that which is available in your mobile browser. To opt out in mobile apps you will need to take the additional step specified below based on your phone type
- To opt out in apps on iPhone, iPad or iPod devices you will need to submit your UDID here
- To opt out in apps on your Android device you will need to submit your Android ID here

▲   ↩   🔖   ⑦

Apple iAd opt-out

How to opt out of interest-based ads from the iAd network

Summary

This article provides instructions on how to opt out of receiving interest-based ads from the iAd advertising network.

Products Affected

iPad, iPhone, iPod touch, iTunes Store

[http://oo.apple.com]

If you do not want to receive interest-based ads on your iOS device with iOS 4 (or later), you can opt out by accessing the following link on the device: http://oo.apple.com. The message "You have successfully opted out" will appear and you will be automatically opted out of interest-based ads. You can always opt back in at any time by visiting http://oo.apple.com from this device.

Google AdMob Opt-out

📶 Verizon 📶 🔋 5:09 PM   1% 🔋

Reset

Reset if you would like to clear your ads preferences and associate new interests and inferred demographics with a new anonymous ID.

[Reset]

Opt out

Opt out if you prefer ads not to be based on interests and inferred demographics. By opting out, your device identifier information will not be used by Google for advertising going forward.

[Opt out]

These preferences only apply to the "Ads by Google" and "Ads by AdMob" you see within mobile applications on this device. To manage your ads preferences for "Ads by Google" you see on websites, visit the Ads Preferences page for

▲   ↩   🔖   ⑧

LeadBolt opt-out app

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BREAKING NEWS:
New Privacy Controls in iOS6

Ad Tracking

iOS 6 introduces the Advertising Identifier, a non-permanent, non-personal, device identifier, that advertising networks will use to give you more control over advertisers' ability to use tracking methods. If you choose to limit ad tracking, advertising networks using the Advertising Identifier may no longer gather information to serve you targeted ads. In the future all advertising networks will be required to use the Advertising Identifier. However, until advertising networks transition to using the Advertising Identifier you may still receive targeted ads from other networks.

- "Limit Ad Tracking" is off by default. When the user turns it on, the identifier for advertisers, "ASAdvertiserManager," can only be used "for the following purposes: frequency capping, conversion events, estimating the number of unique users, security and fraud detection, and debugging."

Questions?

THANK YOU!

Research for this presentation was prepared by Lia Sheena and Nathan Good with input from presenters.

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Interactive Advertising Bureau Mobile Local Buyer's Guide

JUNE 2012

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About this Guide: This document was developed by a sub group of the IAB Local Committee which is part of the IAB's Mobile Marketing Center of Excellence with sponsorship by The Weather Channel.

The Weather Channel ®

weather.com

About the IAB's Local Committee: The mission of the IAB Local Committee is to communicate the value of digital local interactive advertising to national and local marketers and to provide tools for publishers to effectively monetize their local ad inventory. A full list of committee member companies can be found at http://www.iab.net/local_committee

About the IAB's Mobile Marketing Center of Excellence: The IAB Mobile Marketing Center of Excellence, an independently funded and staffed unit inside the IAB, is charged with driving the growth of the mobile marketing, advertising and media marketplace. The Mobile Center devotes resources to market and consumer research, mobile advertising case studies, executive training and education, supply chain standardization, creative showcases and best practice identification in the burgeoning field of mobile media and marketing. Our agenda will focus on building profitable revenue growth for companies engaged in mobile marketing, communications and advertising, and helping publishers, marketers and agency professionals understand and leverage interactive tools and technologies in order to reach and influence the consumer. More information and a list of Mobile Center Board and Supporting members can be found at http://www.iab.net/mobilecenter

This document can be found on the IAB website at: www.iab.net/mobilelocal.

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EXECUTIVE SUMMARY

Local mobile is growing faster than any medium ever, for a simple reason: utility. The more mobile devices can do, the more people rely on them to navigate options where they live. And the more advertisers can give them what they want where they are in the moment, whether that's on the street, in the store, in the office or on the couch.

Research and results confirm that people want local ads, offers, information and content. They act on local ads fast. They visit, they explore, and they buy.

The technologies of Geo-targeting are advancing and multiplying rapidly, as are the types of advertising they support. To get the most from local mobile, planners need to approach it as a channel, not a silo; integrate targeting methodologies to balance precision and reach; and align distribution, retailers and customer service to support the chain reaction that local mobile can set in motion. Creative teams need to design for usability, optimizing ads and landing pages for quick views and clean clicks; and creating ads for particular operating systems.

Mobile encompasses a wide array of devices—including feature phones, smartphones, tablets, and eReaders—for which local advertising is available. While much of the guidance in this document is relevant across devices, this buyers guide is focused on ad opportunities related to phones.

INTRODUCTION

Possibly no medium has ever been as multi-purpose as mobile phones have become. The more a phone can do, the more people do with it; and the more they rely on it. More than 234 million Americans over the age of 13 are now using mobile devices (*ComScore, April 2012*). One report says people look at their mobile devices at least 40 times a day (*Google*), while another puts the number at 150 (*Nokia 2010 study, as reported by Tomi Ahomen at Mobile Web Africa Conference, February 2012*); and another says that more than 91% of mobile phone users keep the device within arm's length 24 hours a day (*Morgan Stanley Technology/Internet Trends, 2007*). For many, it's the first thing they check in the morning, the last thing they check at night, and the first impulse when there's a question of where to go, what to do, and what to know.

Fully 75% of mobile users are more likely to take action after seeing a relevant local ad (*JiWire Mobile Audience Insights Report Q42011*). Those who research products on their mobile devices are ready to buy; 70% take action within an hour, while 70% of people on desktop PCs take action within a week (*Microsoft Location Based Services Usage & Perceptions Study*). What's more, 79% of shoppers use their mobile device to shop, and 70% of them use mobile in-store (*Google-IPSOS, The Mobile Movement, April 2011*).

Almost half of all mobile searches are for location-aware information. With smartphones, it's even more: 95% of smartphone users have used their phones for proximity searches on information (e.g., local weather), products and services. Some 61% have contacted a business after accessing that information; and 36% have made a purchase on that connection (*Google-IPSOS, The Mobile Movement, April 2011*).

Actions Taken After Seeking Local Information

Called the business	61%
Visited a business	59%
Looked up business on a map or got directions	58%
Visited a business' website	54%
Made an in-store purchase	36%
Made and online purchase	22%
Recommended a business	22%
Read/wrote a review	20%
Added business to "favorites" list	19%

Google-IPSOS, April 2011 (n= 4,757 smartphone Users Who Access Local Content)

The immediacy of local mobile creates active engagement for marketers on two essential levels. The first is advertising to attract people to act locally, buying or using your product or service (whether it's a hotel, a beer, or a credit card). The second is advertising to engage them while they're looking.

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Bottom-line, it works. On average, national brands that add local targeting and contact information to mobile campaigns see click-through rates rise meaningfully. Local ad network xAd reports that local boosts the average click-through on a banner ad by as much as 400% (from 0.17%-0.67% average mobile CTR to +0.7% average), and by as much as 150% on a search ad (from 2.9% average search CTR to 5-8% average).

Local is relative. Local mobile adapts to the scale of an advertiser and campaign, incorporates many technologies, and adjusts to a consumer's situation. For a nationwide brand campaign, local can mean DMA (Designated Market Area) level. For a regional restaurant chain, it may mean enticing people within particular neighborhoods to come and check in for a free dessert.

Local mobile is multi-platform. There are seven principal types of mobile marketing: display advertising, search, video, audio, text messaging and mobile activation, and branded applications.

Location-Based Advertising

Display Advertising	Search	Video	Audio	Text Messaging	Mobile Activation	Branded Applications

- *Display advertising* is messaging that users see when browsing and using applications on a mobile device. Display can incorporate static (text and graphics) and rich media (embedded audio and embedded video).

- *Search* advertising appears when users submit queries in search engines, maps, directories and applications.

- *Video* ads are commercials before, during, or after content—whether that's streaming video, animation, gaming, or music videos in a player environment.

- *Audio* ads are :60, :30 or :15 second audio clips delivered in-stream, typically between songs in mobile music apps, often with companion mobile display ads.

- *Text messaging*, or SMS (Short Message Service), can contain up to 160 characters and can be transmitted instantaneously. More than 95 percent of mobile phones are capable of receiving SMS. Nearly all mobile phones now support MMS, or multimedia messaging, which incorporates sound, photos and video.

- *Mobile activation* enables traditional media (print, TV, radio, outdoor) to generate digital interaction. Audiences can be directed to text SMS short codes to register for promotions, vote on contests and entertainment (e.g., *American Idol*), support causes, and more. Similarly, QR codes can direct a device's browser to a specific URL that provides information, registers users for events, and even automatically adds information to device calendars and address books.

- *Branded applications* are apps that marketers create and offer for download in an app store (e.g., Apple App Store, Google Android Marketplace). Advertisers across a wide range of categories—from retail to media to packaged goods—can create mobile apps that perform a service or provide information and entertainment.

Local mobile is a push and pull proposition. Mobile campaigns can involve push and pull messaging. Push messaging requires a database of mobile consumers who have opted in, or agreed to receive messages; so it predominates in loyalty campaigns. Pull messaging works as part of a larger media campaign aimed at customer acquisition, where ads in various media prompt users to respond to a call to action.

Local mobile is dynamic. Technologies are continually being developed to refine all of the elements that make location-aware advertising productive. As the science behind geo-targeting advances, there are more ways to identify where mobile users are located and serve up relevant information and offers. As the related science of attribution emerges, there are more ways to track the effect of mobile advertising beyond the click to a range of secondary actions—from requests for information to retail check-ins, to access to maps and driving directions, to online purchases and calls.

Mobile's instant connection makes the medium an activator for local advertising campaigns. Indeed, mobile produces its most powerful results when incorporated within a cross-media campaign. The keys for media buyers are grounding in the definitions of the new language, understanding the principles for effective incorporation of the medium into an overall plan, and tailoring advertising to the way the medium is actually used.

MARKET OVERVIEW

Mobile will be a defining medium, due in large measure to its utility. By way of comparison, the mobile market is growing as fast as radio and television—the two defining media of the 20th Century—did at inception.

**Technology Adoption (Measured by Population Penetration) in USA
Radio vs. TV vs. Internet vs. Mobile Internet, 1920 – 2011E**

Source: Radio penetration data per Broadcasting & Cable Yearbook 1996. Internet penetration data per World Bank / ITU. Mobile Internet (smartphone) data per Morgan Stanley Research; 3G data per Informa.

Chart published in KPCB Internet Trends 2011 (full report: www.kpcb.com/internettrends2011)

In the U.S., more people now access the Internet via phone than via computer. Fully 78% of Americans go online from a handheld, whereas only 68% surf from a computer *(Google)*. In the U.S., 90% of mobile users have a phone that can access the Internet, and 25% of users access the Internet mostly on mobile devices *(Pew Research, 2011 Spring Tracking Study)*.

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Estimates on the size and expansion of local mobile advertising vary widely—from $4.4 billion to $24.4 billion in 2016, for example—but the single fact remains that the market is growing faster every year. What's more, the mobile market (feature phones, smartphones, and location-enabled devices) is expected to eclipse the desktop universe rapidly. One estimate puts mobile at 88% of all local online marketing by 2016, versus only 6.3% in 2011 *(Borrell Associates, 2012)*. All the analysts agree on two things: Mobile is becoming paramount in the advertising mix, and local will likely comprise more than two-thirds of all mobile advertising within five years. Simply put, local is how the medium is used.

On the high end of estimates, Borrell Associates expects local mobile display to grow from $2.2 billion in 2011 to more than $8.8 billion in 2016 (44% of $20 billion local display market). Meanwhile, local mobile search is expected to climb from $133 million in 2011 to more than $2.7 billion in 2016, or from 2% to 64% of all mobile search. Similarly, local mobile video is projected to vault from $58 million in 2011 to $2.9 billion in 2016, carrying over half of all local rich media.

Other estimates, while considerably more conservative in scale, support the pace of growth. For example, BIA/Kelsey's *U.S. Mobile Local Ad Revenue Forecast* projects overall mobile ad spending to grow from $690 million in 2011 to $4.86 billion in 2015, with local rising from $320 million to $3.37 billion (app. 65% of overall).

Mobile is fast becoming a primary local marketing channel.
All Estimates, Projections, and Forecasts in $ Millions

As of First Quarter of 2012 — Mobile Projections are Preliminary

Search

Year	Total Local	Local Mobile	Mobile Share
2011	$5,699.64	$133.89	2.3%
2012 (P)	$6,272.91	$960.42	15.3%
2016 (F)	$4,273.53	$2,741.79	64.2%
'11–'16 % Change	(25.0)	1947.8	

Display

Year	Total Local	Local Mobile	Mobile Share
2011	$2,208.37	$2,208.37	30.3%
2012 (P)	$3,654.66	$3,654.66	40.2%
2016 (F)	$8,809.31	$8,809.31	43.9%
'11–'16 % Change	298.9	298.9	

Video/Rich Media

Year	Total Local	Local Mobile	Mobile Share
2011	$2,456.37	$58.32	2.4%
2012 (P)	$3,513.66	$291.50	8.3%
2016 (F)	$5,565.82	$2,854.26	51.3%
'11–'16 % Change	126.6	4794.1	

SMS

Local Mobile
$840.51
$1,465.09
$2,313.90
175.3

Borrell Associates counts SMS as an ad delivery mechanism vs. ad category (search, display and video)

LOCATION-BASED TARGETING

It's important to match targeting levels to a business's real needs.

There are two general types of ad targeting for local mobile, and eight levels of targeting precision currently available.

The two general types are **geo-fence** and **geo-aware** targeting. Geo-fencing is relative to a place; it involves establishing a radius around a physical location (e.g., bar, restaurant, store) and serving ads to mobile consumers who are within that range. The range can be set from hundreds of feet (within stores) to several miles (suburban and rural locations). Geo-aware targeting is relative to a device; it's establishing a range around the device location and serving ads that recommend actions within the user's reach.

There are eight levels of precision, determined by how location data is processed. From most precise to most general, they are:

GPS

WiFi – ISP

Geo-Search

Mobile – IP

Registration

Location-based content

Cell tower/triangulation

Caller ID

It's important to know how these targeting levels are achieved—how the data is parsed—because the nature of the data flow determines what you can actually do. For example, precision does not guarantee scale or reliability.

GPS, or Lat/Long as it's called in the trade, relies on the device to pick up signals form the orbiting Global Positioning System satellite network. Users opt in to access location-specific content (e.g., maps and movie listings). GPS is the most accurate in places with clear lines of sight skyward. Because GPS is hampered indoors and among tall buildings, and users have to activate the feature, the applicable number of location-enabled phones varies. For this reason, GPS is typically supplemented with cell tower triangulation and Wi-Fi access point information.

WiFi – ISP estimates a user's location within the radius of a wireless network access point (e.g., in a home or store). The user's device has to be connected to the network. This geo-location method is accurate at the DMA level and, frequently, on a neighborhood level.

Geo-Search terms are relatively accurate determinants of a user's location because the person actually enters them (e.g., city, state, ZIP) in a search bar or map (e.g., weather or restaurant delivery). Geographic specificity is determined by the search terms. While a person can be in one place while searching for results in another, entering geo-search terms verifies a user's intention of retrieving information for that locale.

Carrier IP identifies a device by a numerical identifier (assigned by the carrier) that allows it to receive information across networks. Because it is integral to the device itself, it is one of the more consistent (though not most precise) forms of targeting.

Registration data assigns location according to a user's account address. Geographic specificity ranges from country to state level, depending on the type of registration data being collected. Like geo-search, registration cannot account for mobility.

Location-based content assumes proximity to a Web page containing local content (e.g., local newspaper). The nature of the content indicates the reader's local interest and intent, though not current location.

Cell tower/triangulation identifies all the devices operating within its range. It's accurate at the market level where there are multiple towers in proximity to users (e.g., dense urban areas). ˌBecause carriers control cell data, marketers can't really target on this basis. The data typically refines GPS information from the device.

Caller ID identifies the origin of a caller's phone by area code—either through call-capture or app registration—but cannot confirm the person's location. Mobile phone numbers are portable, so a 917 (New York) caller may actually be in, say, Mobile, AL. Caller ID comes into play principally with text advertising.

Targeting capabilities vary by site, publisher and ad network. Often, providers will combine multiple technologies to provide the precision at scale that individual campaigns require. A planner's foremost job is identifying the level of targeting a campaign needs, then choosing partners to deliver on that basis.

MEASUREMENT AND METRICS

While the baseline measurement on local mobile advertising in the industry today is CTR (click-through rate), the click is just the starting point to true return on investment.

A range of secondary actions put customers in direct contact with companies, brands, products and services. This contact happens offline. In particular, mobile users call to inquire, reserve, or purchase. They also check maps and driving directions to go to a location now. A high percentage complete a transaction within the hour.

Tracking secondary actions is currently a custom proposition. Existing online attribution models can't yet account for the complexity of the mobile infrastructure. As the science of attribution develops, marketers will be more able to isolate specific actions in the commerce chain.

All roads eventually lead to commerce. In local mobile, three fundamental things get measured: acquisition, behavior, and conversion. The fundamental measures of acquisition are how many people, and how many different people, visit your website from a mobile device. For behavior, it's how much time they spend on the site, how many pages they view and how quickly they turn away (otherwise known as the bounce rate). On conversion, it's how many people register, request information, or order (average order and dollars/order).

For click-to-call campaigns, four things should be measured: volume of calls, duration of calls, real vs. mistake (e.g., misdials, solicitors) calls, and percent of calls from potential vs. existing customers (which determines actual cost per call).

iab.

PLANNING

Mobile is not an either-or proposition relative to other local media.

The most important thing a planner can do is ground mobile in a complete media effort aimed at getting people to know, think and do precise things. That starts with mapping out the entire mobile user experience relative to a brand, product or service. In other words, how will people use the information your ad provides?

Success is determined ultimately by the context of engagement—what you're trying to accomplish. The first question to answer is why. Why local? What do we want to accomplish? Do we need action and traffic? Are we trying to reach younger people on what's emerging as a medium of choice? Are we trying to understand a new communications platform?

If the goal is learning a new medium or user base, you can prioritize precision over reach. If the goal is return on investment—action, traffic and conversion—it's essential to balance targeting with what's repeatable at scale.

Treat mobile as a channel, not a silo. Particularly with check-in campaigns and other limited-time promotions, it's important to incorporate multiple media channels to get the word out. You need reach to spur the involvement. Advertising on these other media might call for the user to send a text message to a short code, thereby opting in to a pull campaign or allowing their phone number to be added to a database for a push campaign. Think American Idol, where viewers cast more votes for contestants (64.5 million last year) than have ever backed a U.S. president.

Plan for the chain reaction. It's important to develop the chain reaction that local mobile can ignite. That means several things. First, develop a mobile-optimized landing page, so users get complete information that loads and fits on the small screen. Second, make sure the product is available. Third, make sure employees and other constituents know what the brand is doing; so when customers check in at a retail location and/or ask questions, they get answers and assistance rather than "Huh?" Fourth, alert any retailers involved to the specifics of promotions, contests and offers that put them on consumers' screens—so you complete the deal or cycle, and you avoid annoying prospective customers. Better yet, involve them in the promotions, by collaborating with them.

Set appropriate scale. From a planning perspective, it's important to balance reach, precision and frequency. The more precisely you geo-target a mobile campaign, the less reach you're getting. So the scale has to fit the scale of the brand and campaign. Most national campaigns can get by with local mobile targeting at the DMA level, whereas local institutions (e.g., bars, restaurants, stores) and promotions involving them (e.g., liquor promotions at specific bars) can target neighborhoods efficiently.

As a rule of thumb, the more people you need to click, visit, inquire or buy, the broader you need to target. If you need people to walk to a big-city restaurant for dinner tonight, then a neighborhood campaign is realistic. If you need to sell diet soda this weekend at a rural closeout store, then a 20-mile radius is appropriate.

Create action…and measure it. The more meaningful actions you prompt people to take beyond the click, the deeper they engage, and the easier you can track campaign impact. Ask people to do something specific. For example, go to the nearest bar location tonight and check in on Foursquare to get a free drink sample, or vote for your favorite neighborhood restaurant today to get a redeemable coupon. The reward cycle wins fans while telling you a great deal about what people will respond to.

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Click to connect. The easiest response to any mobile phone ad is a call; it's a phone, after all, and you can talk on the go better than you can type on the go. More than half of the calls generated by local search ads come from mobile phones; and a phone number can increase click-through by as much as 8%. Add a click-to-call feature and make it prominent if you're marketing a service that's complex or requires reservations. Offer something free or substantially discounted, track calls from ads, and support callers with trained professionals.

The next easiest response is to click on a map. For any type of retail location, consider incorporating a store locator with one-click access to street maps and driving directions.

Click to text. Allowing consumers to text customer service adds a level of engagement and creates an opportunity to show responsiveness. A "Text Us" button, prominently displayed under customer service, is enough to prompt the connection.

Take the mobile web in-store. Particularly for big brands with the user bases and capital to justify and maintain them, apps and optimized sites that speed information and shopping are an option. They can bestow utility on a brand in ways that traditional advertising can't. For example, some retail apps reward shoppers with coupons when they check in on Foursquare; others even connect shoppers with sales associates in store.

Automate campaign management. Particularly for smaller advertisers that know what needs to be done but can't meet the minimums publishers require, self-service systems to automate campaign management can make sense. For example, there are rich media templates that permit advertisers to create ads by dragging and dropping assets from their own libraries. And there are media logistics companies that can take over campaign execution, from contract management to optimization and payment. By contrast, it's important to deal directly with salespeople when there are special components—custom content, sponsorship, or special metrics—involved in the campaign.

Push for projection and proof. Small, local businesses, in particular, need to push websites, directories and search engines to set expectations. Providers should be able to tell prospective advertisers what to expect from mobile investment, in addition to validating what actually happened.

DESIGN

Successful mobile design mimics the way people use their mobile devices in particular moments. The key is speed of search, discovery and transaction.

Rule number one: Optimize. Design ads and other content for mobile to work within the screen, and always establish mobile-friendly landing pages for any links. Sending mobile consumers to the regular website is the #1 mistake in mobile. Full website pages require too much manipulation (the user has to expand the page, then scroll across as well as up and down to read it).

If a mobile site doesn't meet the needs for information easily at speed, 61% of consumers won't come back. What's more, 40% will click straight to a competitor's site, and 20% will take away a bad taste for the business (Compuware, *Why The Mobile Web is Disappointing End Users, March 2011*).

Keep it brief. Headlines consumers can read in two seconds, and obvious calls to action, are paramount.

Make your contact information prominent. Links to phone, email and address with map (map is essential) need to be unmistakable.

Design for particular platforms. Rich media features differ by device, operating system and platform (e.g., apps). Larger advertisers will need to create separate versions of mobile apps for Google's Android and Apple's iOS operating systems—hardware platforms with the largest installed bases (depending on campaign or audience, Microsoft's Windows Phone and RIM's Blackberry platforms will also matter)—while smaller advertisers may need to start with just one. For mobile web it is easier to design experiences that work across platforms—as long as designers stick to mobile web standards and avoid Flash —though substantial testing is required to ensure a consistent experience.

Thumb-proof the landing page. Put some white space between the buttons and links, so users can hit the right ones without having to zoom in. Preserve the brand imagery but scale it down for the handheld screen.

PRIVACY

Location privacy is an escalating issue for legislators. It's incumbent on advertisers to understand the rules that affect what you can do, and how you can do it, in mobile.

Privacy legislation centers on three things:

1) Who has access to location data and how it is used.
2) The extent to which consumers are aware of location tracking.
3) The degree of control that consumers can exercise over location tracking.

The sticking point is identifying, using and monitoring location without a consumer's expressed consent. Legislators fear for both privacy and safety, often citing the potential for stalking and child endangerment. The pressure intensifies as more passive connection technologies (e.g., ambient social networking apps, which transmit location, data and personal information between devices in a geographic area) come into play.

Currently, location opt-ins are device or platform specific. Apps that pivot off location will ask, via pop-ups, for approval to "use current location." Typically, geo-fencing ads will reach any phones that are location-enabled and in range. While most carriers now ship devices with location disabled, and consumers can disable the location function at will, legislators argue that most mobile users have no idea they can be geo-located, and that there are other methods of pegging a device's location.

The Digital Advertising Alliance (DAA) is in the process of developing mobile self-regulatory principles to address consumer notice and control over collection and use of location data. An industry approved mechanism for providing the consumer with notice and the ability to consent to location collection and use will be incorporated into the DAA program in the future.

For advertisers, the golden rule is *let them know.* Giving people the opportunity to choose—opt in or opt out of location tracking—satisfies the responsibility to honor privacy. This consideration needs to be built into every stage in the consumer communication chain.

EXAMPLES/CASE STUDIES

How does local mobile actually work for an advertiser? Here are a few examples of how large national brands and small local businesses alike have used the medium successfully.

Behold a RadioShack

Goal: RadioShack sought to raise brand awareness among Hispanics, get more people to renew mobile contracts in its stores, and reinforce its market leadership in mobile phone and accessories (40% of chain revenues) sales.

Execution: Created by MindShare Chicago and produced by Verve Wireless, the campaign employed six technologies—GPS, WiFi-ISP, registration, carrier IP, cell tower triangulation and location-based content—to deliver ads to devices registered at least 18 months before when the owner was within five miles of a RadioShack.

Creative: The run-of-network campaign integrated mobile circulars and location-aware dynamic ads. The banners clearly stated proximity to the nearest RadioShack. When clicked, each ad offered a map pinpointing the store location and a connection to the deals of the week.

Result: Fully 89% of campaign impressions were generated within the five-mile radius of RadioShack locations (the remainder in the five- to 10-mile range). CTR doubled the industry standard. On average, people engaged with the ad for a full 26 seconds. Recall and favorability rates rose significantly, as did relevance (agreeing that RadioShack products and services meet my needs).

Radioshack - Dynamic Banner

Radioshack - Map (Resolve)

Welcome to Luxury Dentistry

Goal: Mint Dentistry, a luxury dentistry practice in Dallas, TX , wanted to bring in new clients, specifically affluent customers.

Execution: Mint Dentistry worked directly with Pandora to run a three-month promotion via Pandora, the customizable online music channel based on Pandora's registration data. They decided to run a campaign targeted to adults 25-54 covering zip codes within a 10 mile area of the Mint Dentistry office on Pandora's mobile app in order to reach the customers Mint Dentistry was looking for.

Creative: The creative consisted of an audio ad unit that simply stated the promotion, office location and phone number. Clicks on the banners led to www.mintdentistry.com, which is a mobile optimized experience.

Result: Pandora served more than 2 million targeted ads, delivering a CTR of 1.38%. Mint's new patient volume increased 300%. The Dentist, Dr. Field Harrison, was blown away by the results. Lacking the elaborate tracking mechanisms of major brands, Dr. Harrison simply compared new patient volume month to month, and asked new patients, "How did you hear about us?"

Free Fryday

Goal: Burger King needed to bring people into its U.S. locations to try a new French fry.

Execution: Mobile provided the promotional lever in a media mix including social media, digital and TV. Mobile ads before and during the event directed people within five miles of a Burger King to stop in and try it the new fry free on Friday. Starcom ran the ads across the Verve Wireless network of 3,500+ premium national and local mobile media sites. Ads dynamically updated restaurant listings based on location, determined by GPS, Wi-Fi, ZIP code, and carrier IP, and scored for accuracy via proprietary Verve mobile technology.

Creative: Custom tap-to-calendar and tap-to-map rich media units incorporated a countdown clock to "Free Fries Friday" (12/16/2011) at the local Burger King. Every execution listed the hashtag #BKFREEFRYDAY to prompt sharing.

Result: According to a post-promotion Beacon study, "Free Fries Friday" was cited in 40% of online conversation about Burger King during the promotional period. The chain registered a 37% increase in restaurant traffic on "Free Fries Friday" — the highest lift it experienced in 2011. As a result, Burger King commissioned a full schedule of location-aware, dynamic mobile campaigns in 2012.

doubleclick for advertisers
by Google

DoubleClick Verification is a feature in DoubleClick for Advertisers (DFA) that helps advertisers ensure that their ads serve correctly, appear alongside appropriate content, and find an audience within the desired geo-targeted region. It has been designed to follow IAB ad verification guidelines.

Currently free and available to all customers of DFA, Verification offers effortless access to verification features. There is no special implementation process or need to tag your sites to activate the features. Simply sign on to the system and access Verification in the reporting user interface.

Why do you need DoubleClick Verification?

DoubleClick Verification helps identify sites with the right context for your ads—and highlights sites that you might not want to your ads to appear on. Our system analyzes content at the URL level for each page your ads serve to, employing 18 content classifiers across 11 languages. Use our advanced UI to build and apply content profiles on the fly. You can categorize sites instantly with a dynamic content signal formula and check whitelists/flagged lists of up to 10,000 domains.

Key Feature Overview

Service Line	Unique DFA Features
Site Context Monitoring	URL-level 11 common languages 18 classifiers with more to come • Covers many common content types, from Adult to Forums to Transportation Accidents
	Creative Types Supported • Image • In-Stream (looks at page content, not the video itself) • Flash • Mobile Web • DoubleClick Rich Media
Geo-Targeting	Based on DFA Reporting numbers for highest possible accuracy. Unsampled data is available at multiple levels: • Country • State • DMA® Region (US Only)
Ad Tag Verification	• Highlights potential tag implementation issues. Checks all incoming ad requests for any issues with the tags

Our simple, easy-to-use UI helps you control what types of content are marked as appropriate and highlights issues with your campaigns.
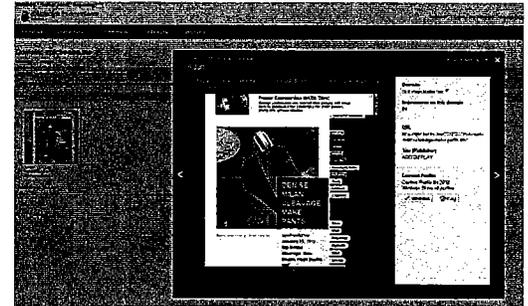
Image Review Page:

This page streamlines the review process. You can easily view all the sites where your ad served, list all the URLs for a given domain on a single screen, add that domain to a whitelist or flagged list, and move on to the next domain.

In the screenshot, you can see that for every image review page, you get information on:

- The domain
- The number of impressions you have that were served on this domain
- The URL
- The site

From this page, you also have the ability to add the site to a whitelist or flag it so that you see an alert every time your creative ends up on this site.
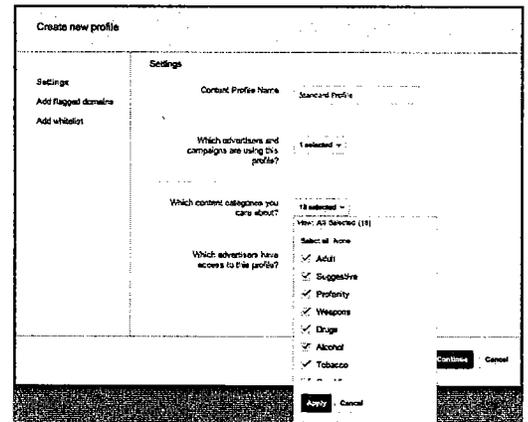
Content Profiles with Whitelist/Flagged list Reporting Capabilities

Content profiles are useful when you want to run different campaigns on different kinds of sites, such as family-appropriate sites versus more mature sites. You can create separate profiles for the different kinds of content that are appropriate for your ads, then whitelist or flag specific domains accordingly. For example, when you manage a family-friendly content profile, you might choose to flag domains with content related to violence, drug use, or profanity. But for your mature content profile, you might whitelist these same kinds of content, so that your more mature ads can also find the appropriate audience.

Features on the horizon

At DoubleClick we are always looking to improve and build more robust solutions for clients. With Verification we are specifically looking at providing future solutions for ad placement and viewability as well as handling the issue of pre-emptive blocking. For viewability we expect to incorporate ActiveView technology already in pilot in DFA. We are also currently looking into the best way to provide pre-emptive blocking with the goals of achieving lower latency and seeing fewer discrepancies.

To find out more about how you can benefit from DoubleClick ad verification, contact your DoubleClick representative or visit **www.google.com/doubleclick**.

About DoubleClick for Advertisers

DoubleClick for Advertisers (DFA) is an ad management and ad serving solution that can help you manage the entire scope of your digital advertising program: media planning, trafficking, targeting, serving, optimization and reporting. With DFA, advertisers and agencies can streamline normally time-consuming tasks associated with the trafficking workflow, enjoy consistent measurement across all digital campaigns and gain insight into campaign effectiveness thanks to robust reporting and analytics tools.

About DoubleClick

Google's DoubleClick™ products provide ad management and ad serving solutions to companies that buy, create or sell online advertising. The world's top marketers, publishers, ad networks and agencies use DoubleClick products as the foundation for their online advertising businesses. With deep expertise in ad serving, media planning, search management, rich media, video and mobile, our DoubleClick products help customers execute their digital media strategy more effectively.

doubleclick
by Google

Amplify™ is a Web Service That Brings Human Understanding to Content

Using patented Natural Language Processing technology, Amplify™ identifies the significant topics, emotions, intentions and actions contained in text. Our platform delivers real-time XML data that enables advertisers, publishers and ad networks to take the guesswork out of brand safety and targeting decisions.

Topics | People | Brands | Sentiment | Actions | Intentions | Locations | Timescales | Emotions | Age | Gender | Education

The meaning platform.

www.openamplify.com

Amplify™

Brand Safety

The growth of social media and massive increase in page impressions from user generated content creates powerful advertising opportunities for brands. But there are risks. How can you monetize the content with confidence?

By analyzing page content in real time and understanding its *actual meaning*, Amplify™ enables advertisers, publishers and networks to take the guesswork out of brand safety. By matching the communication objectives of the advertiser with the precise meaning of the content, Amplify™ generates real-time signals from content that integrates directly with the ad server to exclude ad placements from unsuitable content.

Input: content

Output formats

Fast. Scalable. Accessible.

Whether you are a publisher, ad network, advertiser or solution provider, Amplify™ works alongside your existing CMS or ad server as a web service platform that:

• Requires no client-side technology or infrastructure
• Is fast to deploy and very easy to integrate (CMS/ad server)
• Is commercially robust and extremely cost effective

Register for your API key now at openamplify.com

Amplify™

The Private Exchange

A White Paper

Admeld

We're passionate about helping publishers win.

Contents

Foreword

The digital technology space is as rife with hyperbole as any other, perhaps with the notable exception of politics. Still it's hard to dismiss what's happened in display advertising over the past few years as anything short of remarkable. Real Time Bidding (RTB), data management, private exchanges—none of these innovations is a panacea—but when taken together they represent a universe of new opportunity for both publishers and buyers.

If the first phase in the adoption of any new technology is simply to turn it on, the second phase is about experimentation to gain a deeper understanding of how to use it. That's where we are now, and nowhere is this more apparent than in the realm of the private exchange. For the first time, many premium publishers are looking to these platforms to help them create new efficiencies and revenue streams. In my view, it's every bit as much an innovation in their thinking as it is a technical one.

It's been said before, but it's still early days in display advertising, and we're all working to grasp the implications of all this change. We hope this book will help you gain a better understanding of what private exchanges are and how you can use them to grow your business.

Regards,

Michael Barrett

Michael Barrett
CEO, ADMELD

The Coevolution of Media

Jason Kelly, CHIEF MEDIA OFFICER, ADMELD

While working at Microsoft Advertising and Time Inc., it became clear to me that display advertising was beginning to follow a back-and-forth pattern in which buyers and sellers influenced each other in alternating spurts of innovation. In 2009, I witnessed the increased use of technology by buyers push publishers to do the same, or risk losing their fair share of spend.

In 2011, publishers moved forward again with innovations such as intelligent price floors, data protection/management, and private exchanges. As it pertains to the latter, NBCUniversal, The Weather Channel, quadrantONE, CBSi, and others have embraced the private exchange model because it represents a more holistic, customized, and technically savvy vision for their display business. In response, many buyers are changing their own strategies and approaches, and the cycle is repeating again.

From many a late night watching Discovery, I know that biologists call this a "coevolutionary" dynamic, and in the wild it often leads to an arms race between species in which they leapfrog each other in perpetuity. More than ever, buyers and sellers have the opportunity to avoid the arms race, evolve together, and adopt a more unified approach to serving their mutual client: the advertiser.

In order to help frame a conversation around private exchanges, in the following pages we've compiled a series of viewpoints from various industry executives. Their general consensus is that private exchanges lay the foundation for helping premium publishers and buyers meet their shared goals, a sentiment was best summarized by Arthur Muldoon of Accordant Media, who said *"Private exchanges cultivate testing, learning and scaling of biddable media commitments for both the buy-side and sell-side in a transparent, collaborative environment."*

Other executives commented that the pendulum in the industry has swung too far towards audience buying and that private exchanges are helping to revive context as an important factor in the value of media. And almost everyone we spoke with on the buy side stressed the lack of high quality inventory available in the marketplace. Said Adam Cahill of Hill Holliday: *"The only way to improve [the availability of quality of inventory] is to find ways for premium publishers to make money and maintain more control over their inventory. It seems like private exchanges do that."*

Ultimately, we have to temper our optimism with the reality that things aren't always perfect in private exchange land. Despite conceptual buy-in from many across the industry, there are still barriers that need to be addressed before private exchanges can fully deliver on their potential. Off the record, many publishers we spoke with complained about the lack of demand across the industry. Though spending will surely ramp up in Q4, part of the problem, they say, is attributable to the fact that some DSPs and trading desks are struggling to find the most efficient ways to collaborate given a web of overlapping clients and priorities. This is a natural result of the changes that have taken place in the market, and it will lessen over time.

> **"**
> Ultimately, we have to temper our optimism with the reality that things aren't always perfect in private exchange land. "

Another challenge is that brand budgets have significantly trailed expectations. One of the ways Admeld is helping our clients capture these types of brand dollars is through a component of our private exchange offering called "prioritized bidding," sometimes known as "reserve/guaranteed RTB" or "private ad slots." Prioritized bidding enables publishers to grant preferred access to specific buyers under specific circumstances, giving both buyers and sellers confidence their mutual goals are being met.

At Admeld's last partner forum in February 2011, our theme was 'people, powered by technology,' and we remain committed to that view. The technical infrastructure for efficiently and transparently transacting media is finally coming into place across the ecosystem—now it's up to people on all sides to stop leapfrogging and to start evolving together.

Industry Viewpoints

" The Private Exchange model may be looked back upon as the keystone to the growth and sustainability of ad exchanges overall. Private exchanges cultivate testing, learning and scaling of biddable media commitments for both the buy-side and sell-side in a transparent, collaborative environment. As Accordant Media seeks more targeted, engaging ad inventory for our clients, our sell-side private exchange partners are finding ways to monetize placements in more controlled, premium ways. This win-win mentality helps us all to grow the biddable media industry."

Arthur F. Muldoon
CO-FOUNDER & CEO, ACCORDANT MEDIA

Anthony Rhind
CO-CEO, GLOBAL, HAVAS DIGITAL

"The programmatic buying evolution promises great improvements in terms of inventory efficiencies & targeting effectiveness. However the early market emphasis has been too heavily biased to audience buying, with context incorporated as a behavioural profile or intent data point rather than as an ad placement criteria measured for conversion contribution; this has prompted many 'premium' publishers seeking to maximise yield on the basis of content & environment not to enable transparent programmatic trading of their inventory. The private exchanges are an important first step to build the publisher's confidence that real-time impression markets can drive monetisation upwards, with transparent programmatic buying facilitating price discrimination where inventory is scarce & environment is in-demand, which typically is the case with higher-yield 'premium publishers'. This is a virtuous-cycle benefiting both publishers & advertisers, buyers are able to win desired impressions, with both audience certainty & contextual relevance, balancing the higher publisher yield with reduced wastage & improved conversion."

Darren Herman
CHIEF DIGITAL MEDIA OFFICER, THE MEDIA KITCHEN

"I'm excited with the current and future prospects of private exchanges. We have found that by partnering with our MDC Partners Trading Desk, Varick Media Management, we have been able to come to the table with a real value proposition to publishers and form unique relationships. The partnership of Agency + Trading Desk allows us to move the needle in Tier 1 inventory and give us access to publisher inventory we'd not normally see. The current model of private exchanges will evolve over time and we'll watch it closely and continue to participate as it matures."

David L. Smith

CEO, MEDIASMITH, INC.

"Mediasmith looks to participate more in private exchanges in the coming year. We feel that this is an excellent way to reduce friction and pain points of doing business with sites we already prefer in addition to making it easier to try new relationships."

Bill Wise

CEO, MEDIABANK

"The current digital landscape is too much of a barbell, with a focus on the extremes in the market... One side of the barbell is the premium futures market largely driven by context, while the other is the spot market largely driven by performance and open exchanges. Private exchanges are a necessary middleware to increase yield and market dynamics. However, the absolute key is creating a new composition of demand."

Matt Greitzer

CO-FOUNDER & COO, ACCORDANT MEDIA

"We've learned, or rather re-learned, over the past few years that content matters. So we are excited about private exchanges, and any tools and capabilities that encourage high quality publishers to participate in the biddable media ecosystem."

Drew Schutte

SVP AND CHIEF REVENUE OFFICER, CONDÉ NAST

"Condé Nast is enthusiastic about the opportunity the private exchange provides. As a company that never used ad networks, we are thrilled with the control and flexibility the exchange provides."

" I think the most important issue when it comes to exchange-traded media is quality. Right now there isn't enough high-quality inventory available. The only way to improve that is to find ways for premium publishers to be able to make money and maintain more control over their inventory. It seems like private exchanges do that, and we're all for anything that brings better inventory into exchanges. "

Adam Cahill
EVP, CO-MEDIA DIRECTOR,
HILL HOLLIDAY

" The concept of the private media
exchange makes a ton of sense.
At BlueKai we see a parallel in the
data world – where data creators
need the flexibility to use their
own data exclusively, sell their
data publicly in the exchange,
or sell their data privately on
their own. We can see why the
same dynamic would be driving
the media domain and we can
see why Admeld would lead that
movement."

Omar Tawakol
CEO, BLUEKAI

Mike Kelly
CEO, THE WEATHER CHANNEL

"How digital advertising gets bought and sold is changing quickly. The most valuable display inventory is created by the first party premium sites like Weather.com. Advertisers, seeking scale and price efficiency have been using technology to assemble large audiences, first through ad networks and now with their own proprietary technology. In addition, exchanges provide an opportunity to use data and technology to extract value. As a top 15 site and the largest mobile content site, The Weather Channel has enormous audiences and valuable data. To be competitive, we need to understand and play in all parts of the business as it evolves. Real time bidding, data driven audience buying etc can be opportunities to bring more demand to your inventory. Our sales organization is extremely effective at bringing that value to advertisers but they don't sell all of our inventory. Previously a publisher's only choices were to either not monetize that inventory or sell it through networks or open exchanges. By creating a Private exchange we can go to market in a tiered approach, getting better yield from our inventory while protecting our data and users and staying competitive in this rapidly-changing environment."

Sam Bloom
GM INTERACTIVE, CAMELOT COMMUNICATIONS, LTD.

"Private exchanges enable our clients to work more strategically with premium publishers. We think it's a win/win for both clients and the publishers."

Laura Behling
DIRECTOR, ONLINE MEDIA DEVELOPMENT, DOTOMI

"We are actively engaged across many of the exchanges utilizing the Private Auction model. Because we are willing to pay more for premium inventory, it has been an effective way to acquire quality, brand safe inventory for our advertisers. This method also allows us to own the relationship with the publishers we are buying from.

There are nuances that the publishers control so the buyer needs to understand exactly what they are getting in a private auction. Is the negotiated price a floor price or a fixed price? Is there a budget commitment involved? Are you guaranteed "first look" or early session impressions? It's important that the buyer know how the publisher allocates its inventory and understands all of the details of the deal before committing to a buy.

I see this as a positive for both the advertiser and publisher as it is a mechanism for publishers to select only the advertisers it wants, avoiding conflict with their direct sales channel and it opens up quality brand safe inventory for advertisers."

Bill Murray
VICE PRESIDENT OF ADVERTISING OPERATIONS, THE WEATHER CHANNEL

"Category 5, the Private Exchange we have built with Admeld has provided us a cost effective way to more strategically manage unsold inventory. The rules–based nature of the platform not only allows for exclusive access, pricing and simplified management of multiple vendors, it also provides tremendous insights into the value of inventory. As a result, we know who to work with, what they are interested in buying, and can price accordingly. With the continued shift to audience buying, this is an essential tool for us. That said, this is not an "If you build it, they will come" scenario. Advertisers and networks must still be engaged to educate them on the characteristics and value your property. Increasing demand for your inventory is essential to realizing success."

The Admeld Private Exchange Solution

Admeld's Private Exchange Solution

Designed for the World's Top Publishers

NBCUniversal
Digital Media

CBS Interactive

quadrant**ONE**
Local Audience Insights. Premium, National Reach.

The Weather Channel ®

In November 2010, Admeld launched the industry's first private ad exchange—a highly customized, invite-only marketplace designed for the very largest publishers – those with audiences over 30 million uniques and the brand equity to attract buyers on their own.

Direct Connections to Every Major Demand Source

Admeld connects you directly to every Demand Side Platform (DSP), trading desk and ad network. It's your choice who you allow to transact.

Maximum Revenue

Founded in 2007 for ad network optimization, Admeld is the recognized leader in yield optimization for premium publishers. This is manifested in several cutting-edge private exchange features.

Intelligent Floors

Admeld's dynamic price floor technology determines the maximum price based on market value, specific business rules, and historical bidding patterns.

Prioritized Bidding

Creates an upfront bidding environment, empowering you to set rules within the exchange and giving preference to buyers (DSPs or Agency Trading Desks) based on pre-negotiated terms.

Brand & Channel Conflict Protections

Admeld's technology gives you complete control over who can access your inventory and at what rates for private exchange clients, the controls are even more robust:

Advertiser–Level Block Lists

Granular settings to specify which advertisers, agencies, and DSPs can access your inventory.

Advanced Data Protection, Malware & Pixel Scanning

Firemeld

Firemeld was the industry's first in–browser reporting tool for sales and ad operations professionals. It enables you to monitor and control every ad running across your properties.

Deep Audience Insights

Admeld's data analytics enable you to correlate and analyze pricing data with your own data segments or those from top 3rd parties. This enables you to identify, package, and sell your most valuable users across your exchange.

Strategic Advisory Services

Admeld's Strategic Advisory Services group provides our private exchange clients with expert guidance and support ranging from project–managing, complex technical implementations, to helping secure demand from major buyers.

Case
Studies

quadrant**ONE**
Local Audience Insights. Premium, National Reach.

For quadrantONE, a joint venture by Tribune Company, Gannett Co. Inc, Hearst Corporation, and the New York Times Corporation, Admeld created "Q-Exchange." The technology enables quadrantONE to manage their unsold ad inventory, and give buyers the ability to target specific audiences and markets across the publisher's properties.

Client Objectives

In early 2011, quadrantONE entered discussions with Admeld around the concept of creating an exchange of their own to manage how inventory for The New York Times Co., Hearst, Tribune and Gannett was sold. They no longer wished to offer their inventory through other networks, as they weren't providing the best dollar return, nor did they provide the control the brands required.

Admeld's Solution

Admeld developed a custom private ad exchange offering for all four media companies, focusing on their premium and regional inventory. "Q-Exchange" allows the four partners to safely and transparently monetize their unsold inventory via RTB in Admeld's marketplace, while maintaining control over each impression. "Q-Exchange" gives quadrantONE complete control over sales of their unsold inventory, reduces channel conflict, and aggregates inventory for the benefit of the buy side. To date, quadrantONE has found that inventory sold via RTB is out-performing traditional yield optimization. quadrantONE estimates that "Q-Exchange" will handle the sale of around 2 billion impressions a month moving forward.

" We chose Admeld to power
Q-Exchange because their
private exchange technology
provides maximum control,
transparency, and versatility."

– Mario Diez CEO of quadrantONE

The Weather Channel

Admeld created "Category 5" for The Weather Channel (TWC), the first major global brand to launch a private exchange. With Category 5, programmatic buyers gain direct access to all 50 million + TWC's mobile and online users while giving the publisher complete control over how each impression is sold.

Client Objectives

TWC sought to increase the overall value of both its display and mobile inventory and to manage relationships with advertisers more directly rather than work through third-party ad networks. The company wanted to more efficiently manage the way their uncommitted inventory was sold while exerting more control over pricing and other criteria.

Admeld's Solution

Admeld addressed TWC's needs by developing a private exchange to exclusively manage the company's online and mobile inventory. "Category 5" connects TWC to every major programmatic buyer and has an audience sales module that enables the publisher to identify, package, and monetize their most valuable users. Additionally, Category 5 provides analytics and controls necessary to help TWC stay aware of buying and pricing trends. With Category 5, TWC now connects advertisers (including buyers from the largest media holding companies such as Omnicom and Vivaki) directly to their consumers.

" Category 5 empowers us to analyze, package, and sell our audience in a way that meets the needs of advertisers and protects our users' interests."

– Mike Kelly, president & CEO, The Weather Channel Companies

NBCUniversal
Digital Media

In July 2011 NBC's Universal Audience Platform, the company's internal ad network, added a private exchange, powered by Admeld, creating a new programmatic sales channel for buyers to access various premium audiences, including most of NBCU's owned-and-operated digital properties.

Client Objectives

NBCU's goal was to further evolve the relationships with their agency partners and dial back their use of ad networks that had been selling against their media brands. They needed to monetize their indirect inventory in a controlled, biddable environment and were looking to remove any uncertainty around the identity of the buyer.

Admeld's Solution

With the creation of UAP's private exchange, NBCU can now verify their most valuable audience segments, grant access to a select group of buyers, and set granular rules around pricing their inventory. The company is now efficiently monetizing their inventory within their own private marketplace.

" One of our main goals in launching the UAP was to take better control over our uncommitted digital ad inventory and dial back our reliance on third party ad networks... By launching this private exchange, we can work directly with our agency and media partners, offering them better pricing, more informed and targeted advertising buys, and the opportunity to deal directly with trusted and premium content sources."

– Peter Naylor, EVP, Digital Media Sales, NBC Universal Digital

CBS Interactive

CBS launched an Admeld-powered private exchange to offer a select group of buyers access to their premium inventory, and gain from the controls and efficiencies that the Admeld platform offers. Within this exclusive environment, CBS now sells directly to select trading desks and agencies.

Client Objectives

CBS Interactive approached Admeld with the objective of creating an invite-only, RTB buying environment. They were interested in establishing a presence in the exchange channel to serve the evolving needs of their clients, while securely protecting CBS Interactive's brands & data and providing a new solution for CBS Interactive's salesforce to take to market.

Admeld's Solution

The CBS Interactive private exchange has effectively provided buyers the ability to reach CBSI's high-quality audiences and has allowed the company to provide marketers direct solutions for programs typically bought from Ad Networks & Exchanges.

" The opportunity to bring together data, biddable transactions, the internet's greatest brands and buyers who pay fair market value for these audiences is a great evolution for the exchange category of this industry. Admeld is providing CBS Interactive with technology that allows us to partner with our clients in new ways, giving them the safety of premium brand environments, while delivering the transparency and control we require. The Admeld team has played a key role in our efforts to evolve the way exchange partnerships are structured and opened the channel as an opportunity for premium publishers."

– Zack Rogers, SVP Sales Strategy & Operations, CBS Interactive

Our Executive Team

Admeld Leadership

Michael Barrett

CEO

Michael joined Admeld from Fox Interactive Media, where he was Executive Vice President, Chief Revenue Officer and oversaw worldwide revenue for all properties, including MySpace, IGN, FoxSports.com, Fox.com, AmericanIdol.com and Scout.com. Before Fox, Michael held senior sales positions at interactive leaders AOL Media Networks, GeoCities/Yahoo! and Disney Online. Prior to joining Disney, he held senior positions with Meredith Publishing, Newsweek Magazine and Family PC Magazine.

Benjamin Barokas

CO-FOUNDER & CHIEF REVENUE OFFICER

Ben oversees the company's worldwide sales and operations efforts. Prior to founding Admeld, Ben was Vice President of Advertising for JumpTV. He also spent 6 years at AOL in a variety of online advertising leadership positions including senior manager on the team that developed and launched the AOL video platform. Ben serves on the IAB's Networks and Exchanges Committee and is a regular industry speaker on monetization strategies for premium online publishers, yield optimization, data, and Real Time Bidding (RTB).

Brian Adams

CO-FOUNDER & CTO

Prior to founding Admeld, Brian was Vice President of Engineering at JumpTV. Prior to JumpTV, Brian had been with AOL where he led the development of the AOL Video advertising infrastructure. Prior to AOL, Brian was a founder of MyBookmarks.com, which was sold to Backflip Inc. in 2000 and was a senior engineer at Angelfire.com.

Jason Kelly

CHIEF MEDIA OFFICER

As Admeld's Chief Media Officer, Jason oversees the company's global relationships with demand and data partners, and spearheads strategic projects serving the Web's largest and most prominent publishers. Jason joined Admeld from Time Inc., where he was Vice President of Strategy & Revenue Management. Prior to Time Inc., Jason was at Rapt, a part of Advertising and Publisher Solutions at Microsoft. Before that, he spent more than a decade in the airline industry, most recently as the director of revenue management, sales and online distribution for Virgin America.

Contact Information

Admeld's mission is to keep premium publishers on the cutting edge of advertising technology, enabling them to maximize revenues and sell their inventory smarter and safer. Founded in 2007, the company has more than 500 clients worldwide.

New York

One Madison Avenue
4th Floor
New York, NY 10010
(212) 244-1144

London

Butler House
177-178 Tottenham Court Rd
London W1T 7NY
+44 (0) 203 402 1715

Berlin

Münzstraße 19
10178 Berlin
Germany
+49 30 3087 4620

Toronto

250 Augusta Ave
3rd Floor
Toronto, ON M5T 1N9, Canada
(212) 244-1144

AGENCY RTB LANDSCAPE

HOLDING CO.	TRADING DESK	AGENCIES	SELECT RTB CLIENTS
IPG	Cadreon	Hill Holliday Initiative Lowe & Partners Mullen Universal McCann	American Airlines Chrysler Dodge Geico
OmnicomGroup	Accuen Media	OMD Worldwide PHD	Hilton Hewlett Packard Nissan State Farm Insurance Pepsi
PUBLICIS	Vivaki	Digitas Moxie Publicis Modem Razorfish Starcom MediaVest Zenith Optimedia GM Planworks	AMEX US AstraZenica/Symbicort Blackberry Gerber Life GM/Chevrolet Microsoft Safeco State Farm Insurance Verizon
WPP	The MIG Xaxis	Ogilvy & Mather Team Detroit **GROUP M** Mindshare Maxus MECi MediaCom	21st Century Insurance AT&T Dominos Pizza Kodak Mazda Royal Carribean Sprint Volkswagen
HAVAS	Multiple	MPG Media Contacts	Tyson Carnival Cruises
MDC	Varick MM	kbs + p The Media Kitchen DotGlu IMS	Windstream Armani Exchange BMW Vanguard

These are the agency players using RTB through Admeld as of August 2011.
Updates at www.admeld.com/agencyrtbmap

AGENCIES THAT GO DIRECT TO DSPs

AGENCIES	SELECT RTB CLIENTS
Camelot	Southwest Airlines Neiman Marcus
Cole & Weber	Capella Capital One
iProspect	Estee Lauder
Mediasmith	NetApp Citrix Online
Morpheus Media	NYTimes
Ocean media	Overstock.com
CompassPoint	Red Baron Pizza
Fallon	Traveler's Insurance

TECHNOLOGY DIRECTORY

ACCORDANT
accordantmedia.com

ADNETIK
adnetik.com

ADVERTISING.COM
advertising.com

APPNEXUS
appnexus.com

BRANDSCREEN
brandscreen.com

BUYSIGHT
buysight.com

CHANGO
chango.com

CONTEXTWEB
contextweb.com

CRITEO
criteo.com

DATAXU
dataxu.com

DOTOMI
dotomi.com

INVITE MEDIA
invitemedia.com

LUCID MEDIA
lucidmedia.com

MAXPOINT INTERACTIVE
maxpointinteractive.com

MEDIA6 DEGREES
media6degrees.com

MEDIABANK
mbxg.com

MEDIAMATH
mediamath.com

MYBUYS
mybuys.com

NETMINING
netmining.com

PERMUTO
permuto.com

QUANTCAST
quantcast.com

RADIUMONE
radiumone.com

ROCKETFUEL
rocketfuelinc.com

SIMPLI.FI
simli.fi

SITESCOUT
sitescout.com

SOCIOMANTIC
sociomantic.com

THE TRADE DESK
thetradedesk.com

TRIGGIT
triggit.com

TUBEMOGUL
tubemogul.com

TURN
turn.com

YAHOO
yahoo.com

XA.NET
xa.net

X+1
xplusone.com

Politico

Parents worried about teens' online habits, survey shows

By Alex Byers

11/20/12 10:01 AM EST

Most parents of teenagers are worried about their kids' online activities — and four out of five of them are concerned about how much their children are being tracked by advertisers — according to a new report released Tuesday.

More than 80 percent of the parents surveyed said they're worried about how much third parties are learning about their children's Internet behavior, according to the study by the Pew Internet and American Life Project and the Berkman Center for Internet and Society at Harvard University. The study also found that in an increasingly socially networked world, nearly three-quarters of the parents are anxious about their kids' interaction with strangers on the Internet.

"People don't like the idea of being tracked online. We have lots of data that points to that," said Mary Madden, a research associate at Pew. "There's not a lot of transparency for people to understand how their information is being used. For parents, they recognize that children are very valuable and vulnerable consumers, and they naturally want to protect their kids."

The report comes as the FTC works on updating its rules under the Children's Online Privacy Protection Act. The agency's proposed changes — which have generated almost 100 public comments — would require third-party advertisers or plug-in makers to adhere to COPPA and clarify that "persistent identifiers" like cookies fall under COPPA's umbrella of "personal information."

In addition to marketing and safety-related questions, parents say they are thinking about their teenaged children's future, according to the report. Sixty-nine percent of respondents said they're concerned about how their child's online activity could affect job or academic opportunities, and the same number said they were concerned about their children's reputations.

Parents of younger teens are particularly worried, the report found. More than half of parents with 12- or 13-year-olds said they are "very concerned" about communications with strangers and online reputation.

Madden pointed to an increase in social media use by parents — 66 percent of the parents surveyed say they use social networking sites — as another key development. Not only are kids

1

and their parents friending each other, Madden said, but they are also having conversations about the potential pitfalls kids can encounter on social networks.

"The current complexity of the online environment, particularly the dynamics of privacy and personal data management, particularly on social media, is daunting for parents," Madden said. "Parents are tasked with educating and guiding their kids, but as with many issues, there's no one size fits all."

The study polled 802 parents and 802 teens between the ages of 12 and 17. The margin of error is plus or minus 4.5 percentage points.

To view online:
https://www.politicopro.com/go/?id=16262

From: Davis, Anna
Sent: Thursday, October 25, 2012 11:41 AM
To: Clark, Donald S.
Subject: FW: thanks and follow-up

For the public record....

Anna Holmquist Davis
Attorney Advisor
Office of Commissioner Maureen Ohlhausen
Federal Trade Commission
600 Pennsylvania Avenue, NW
Washington, DC 20580
(202) 326-3207

From: Jeffrey Chester ████████████████
Sent: Wednesday, October 24, 2012 2:28 PM
To: Davis, Anna; Zylberglait, Pablo
Subject: thanks and follow-up

Dear Anna and Paul:

Please accept our thanks for meeting with us today, so we could discuss some of our perspectives related to the proposed improvements to the COPPA rules.

First, here's a link to the very good new Frontline documentary about digital marketing in the election. It makes a few points that we addressed today: http://www.pbs.org/wgbh/pages/frontline/digital-campaign/; http://www.pbs.org/wgbh/pages/frontline/campaign-targeting/

We discussed developments related to "brand safety" and related digital ad practices designed to ensure both transparency and accountability. Here are several resources to start.

1

A good Google brief video on its latest developments related to this issue: http://9to5google.com/2012/10/09/new-doubleclick-ad-verification-tool-enables-smarter-media-buying-video/

The online ad industry has undergone a robust development of tools to deliver the transparency and accountability that most advertisers (and leading online publishers represented by the OPA) now require. Advertisers want and can control where their ad/marketing appears--the exact sites, narrow classes of users or individuals, ad placement, etc. This video from one of the leading Brand Safety companies, Adsafe, provides an overview: http://vimeo.com/36366927#at=0

Adsafe is just one of a number of companies providing these services, which are incorporated in Google and other platforms. I've attached the Google/Doubleclick brochure describing its similar service.
Also attached is a document from Amplify that illustrates how advanced semantic webpage analysis is being used to help advertisers make informed ad targeting decisions. In addition, this link shows how the technology is used by a leading ad network: http://www.collective.com/media/brand-safe-content

Admeld, a RTB platform, has offered brand safety since 2010. The attached paper discusses the growing role of "private exchanges" where leading online publishing sites control their ad inventory, what's placed on its site, etc.

The scale below is also useful as an example of what is being used today by a leading brand safety company working with major advertisers; the link illustrates rating categories used by online advertisers.

http://adsafemedia.com/our-technology/rating-categories

The following provides an overview of the general definition for the level of brand safety that correlates to each AdSafe Content Rating range.

AdSafe Score Range	Likely type of content on the page
>750	Generally acceptable content for all ages and audiences, does not typically contain anything offensive in nature and/or theme.
500-749	Moderate content, typically acceptable for brands. However, caution needs to be given to subjective nature of content (e.g., alcohol, tobacco or partial nudity, such as swimsuits).
250-549	Graphic content, typically moderately offensive but not illegal. High probability that this is offensive for leading brands/advertisers.
<249	Graphic content, usually explicit with high degree of offensiveness, possibly illegal content types (e.g., child pornography)
Not Permitted	Content typically explicitly unacceptable for brand advertisers. (e.g., hate speech, spyware/malware, illegal activity or content)

Note below that the brand safety technologies are also being independently tested by the Joint Industry Committee for Web Standards (doc attached)

AdSafe Media Content Verification and Brand Safety Capabilities Certified by ABC

MARKETWIRE

Press Release: AdSafe Media – Mon, Jun 11, 2012 9:37 AM EDT

- NEW YORK, NY--(Marketwire -06/11/12)- AdSafe Media today announced that it is one of four content verification (CV) tools to receive a public certificate of capability from ABC (Audit Bureau of Circulations), the industry body for media measurement.

ABC sought to review the capabilities of CV tools in the industry. The goal was to increase transparency into the ability of CV technology to reduce the risk of misplaced advertising. AdSafe Media was one of eight companies to submit its technology for review. **Each was tested for its ability to block, in real-time, any content deemed unsuitable for the ad campaign, including rival brands and word associated with obscenity, illegal content, violence, spyware, etc.**

AdSafe's content rating system is the only solution that **automates the brand safety, viewability, context and engagement potential of web pages on the individual page level**. It goes beyond verification with a proactive solution that blocks ads from appearing on inappropriate pages, rather than simply reporting the problem. Since launch in 2009, AdSafe has led the **digital advertising industry in moving the formerly defensive nature of brand safety into a new position of predictive ad decisioning....**For more information or to download the Content Verification Technology Review, visit: http://www.abc.org.uk/Products-Services/Processes-Systems/Content-Verification-CV/.

http://finance.yahoo.com/news/adsafe-media-content-verification-brand-133700212.html

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The Principles by the standards group
Joint Industry Committee for Web Standards

Content Verification (CV) Products
Version 1 2012
Issued January 2012 JICWEBS Content Verification Product Principles JICWEBS CV Product Principles V1 2012 1 © JICWEBS 2012
JICWEBS Content Verification (CV) Product Principles.
This document sets out 10 principles that have been approved by JICWEBS. The principles have been developed following our testing of 8 CV Products which took place in October-November 2011 and replace those principles put forward in May 2011.
Note – principles are set out below in **bold** with supplementary information in *italics*
A CV Product will be tested against the following principles:
1. **Block the serving of advertising on to pages which contain content, deemed to be inappropriate by the advertiser, in HTML source code.** *Detect inappropriate words on a web page or the code of that web page before or after the ad appears.*

2. **Block the serving of advertising on to pages which contain words in content delivered via a linked file deemed to be inappropriate by the advertiser.** *When the page appears in the browser it displays content pulled from another source which may be unrelated to the expected content on the page.*

3. **Register changes in page content and then block the serving of advertising on to pages which contain content, deemed to be inappropriate by the advertiser, in real time.** *A page which has rapidly changing content such as a Forum.*

4. **Block the serving of advertising on to domains and sub-domains, deemed inappropriate by the advertiser.** *An inappropriate text string in the domain or sub-domain name such as http://inappropriate.com OR http://inappropriate.safesite.com*

3

5. **Block the serving of advertising on to pages which contain words in th
e URL, deemed to be inappropriate by the advertiser** *An inappropriate text string contained within the URL such
as http://normal.com/okay/inappropriate.aspx)*

6. **Block the serving of advertising on to aliases of an URL or domain, deemed to be inappropriate to the advertiser.** *A URL may look
like http://normal.com/safe.aspx but the page that is displayed is http:// inappropriate.com/unsafe.aspx*
JICWEBS Content Verification Product Principles JICWEBS CV Product Principles V1 2012 2 © JICWEBS 2012

7. **See through iframes and block the serving of advertising if keywords or URLs, deemed to be inappropriate, to the advertiser, are
detected.** *Inappropriate words may be contained within the iframe which is embedded on a web page and the ad is served on the page, or vice versa.*

An approved CV Product will also be able to serve ads correctly in equivalent scenarios that contain only appropriate content. In addition, the CV Product
will:
8. **Operate consistently in allowing or blocking advertising when JavaScript is disabled.** *If the product requires JavaScript to be enabled by a browser for it
to make a decision as to whether the content is appropriate or not, does it block the serving of ads if JavaScript is disabled?*

9. **Be capable of incorporating any list of keywords or URLs, deemed to be inappropriate by the advertiser, into the CV product within 2 working days of
that new list being produced.**

10. **Be configurable to block the serving of advertising to any URL not previously checked as safe, until the status is known, if identification of content is
not in real time.**

Here is also attached an IAB document on local mobile advertising, because it illustrates
one of the issues. As you know, we are witnessing an explosion of highly localized mobile
marketing ($42b by 2015), via mobile phones and narrowly-geo-targeted services. Page 8
describes some of the ways a user can be tracked. We have already documented how
marketers are targeting youth and others through such techniques as "geo-fences," which
classify people and geography in a neighborhood in a very discrete targetable
manner. Ensuring app and mobile related safeguards for the child geo-targeting
environment is key.

another useful resource is the powerpoint developed by Future of Privacy Forum/World
Privacy Forum for their recent NTIA-sponsored mobile app briefing   I suggest you look at
pages 8, 4, 21, 24-28 especially, which discusses the mobile app data collection system.

I look forward to seeing you again next week. Please don't hesitate to ask us to provide
any additional information or clarification of our perspectives.

Best wishes,

Jeff

Jeffrey Chester
Center for Digital Democracy
1621 Connecticut Ave, NW, Suite 550
Washington, DC 20009

doubleclick for advertisers
by Google

DoubleClick Verification
Enabling smarter media buying

DoubleClick Verification is a feature in DoubleClick for Advertisers (DFA) that helps advertisers ensure that their ads serve correctly, appear alongside appropriate content, and find an audience within the desired geo-targeted region. It has been designed to follow IAB ad verification guidelines.

Currently free and available to all customers of DFA, Verification offers effortless access to verification features. There is no special implementation process or need to tag your sites to activate the features. Simply sign on to the system and access Verification in the reporting user interface.

Why do you need DoubleClick Verification?

DoubleClick Verification helps identify sites with the right context for your ads—and highlights sites that you might not want to your ads to appear on. Our system analyzes content at the URL level for each page your ads serve to, employing 18 content classifiers across 11 languages. Use our advanced UI to build and apply content profiles on the fly. You can categorize sites instantly with a dynamic content signal formula and check whitelists/flagged lists of up to 10,000 domains.

Key Feature Overview

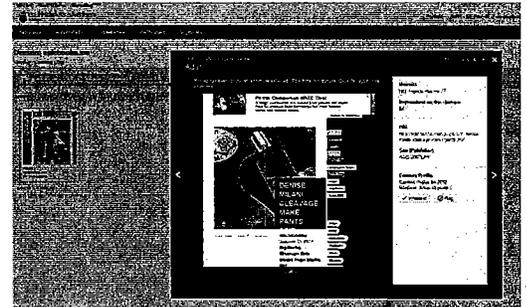| Service Line	Unique DFA Features
Site Context Monitoring	URL-level 11 common languages 18 classifiers with more to come • Covers many common content types, from Adult to Forums to Transportation Accidents
	Creative Types Supported • Image • Flash • DoubleClick Rich Media • In-Stream (looks at page content, not the video itself) • Mobile Web
Geo-Targeting	Based on DFA Reporting numbers for highest possible accuracy. Unsampled data is available at multiple levels: • Country • State • DMA® Region (US Only)
Ad Tag Verification	• Highlights potential tag implementation issues. Checks all incoming ad requests for any issues with the tags

Our simple, easy-to-use UI helps you control what types of content are marked as appropriate and highlights issues with your campaigns.

Image Review Page:

This page streamlines the review process. You can easily view all the sites where your ad served, list all the URLs for a given domain on a single screen, add that domain to a whitelist or flagged list, and move on to the next domain.

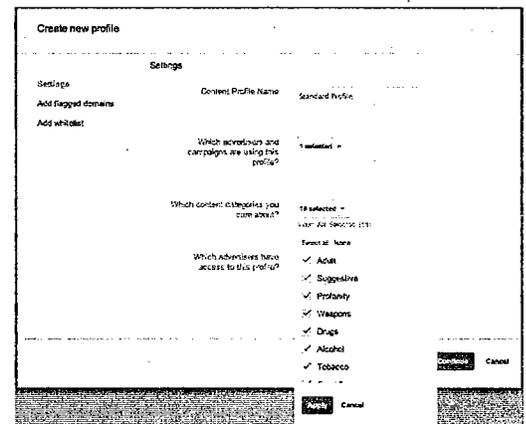In the screenshot, you can see that for every image review page, you get information on:
· The domain
· The number of impressions you have that were served on this domain
· The URL
· The site

From this page, you also have the ability to add the site to a whitelist or flag it so that you see an alert every time your creative ends up on this site.

Content Profiles with Whitelist/Flagged list Reporting Capabilities

Content profiles are useful when you want to run different campaigns on different kinds of sites, such as family-appropriate sites versus more mature sites. You can create separate profiles for the different kinds of content that are appropriate for your ads, then whitelist or flag specific domains accordingly. For example, when you manage a family-friendly content profile, you might choose to flag domains with content related to violence, drug use, or profanity. But for your mature content profile, you might whitelist these same kinds of content, so that your more mature ads can also find the appropriate audience.

Features on the horizon

At DoubleClick we are always looking to improve and build more robust solutions for clients. With Verification we are specifically looking at providing future solutions for ad placement and viewability as well as handling the issue of pre-emptive blocking. For viewability we expect to incorporate ActiveView technology already in pilot in DFA. We are also currently looking into the best way to provide pre-emptive blocking with the goals of achieving lower latency and seeing fewer discrepancies.

To find out more about how you can benefit from DoubleClick ad verification, contact your DoubleClick representative or visit **www.google.com/doubleclick**.

About DoubleClick for Advertisers

DoubleClick for Advertisers (DFA) is an ad management and ad serving solution that can help you manage the entire scope of your digital advertising program: media planning, trafficking, targeting, serving, optimization and reporting. With DFA, advertisers and agencies can streamline normally time-consuming tasks associated with the trafficking workflow, enjoy consistent measurement across all digital campaigns and gain insight into campaign effectiveness thanks to robust reporting and analytics tools.

About DoubleClick

Google's DoubleClick™ products provide ad management and ad serving solutions to companies that buy, create or sell online advertising. The world's top marketers, publishers, ad networks and agencies use DoubleClick products as the foundation for their online advertising businesses. With deep expertise in ad serving, media planning, search management, rich media, video and mobile, our DoubleClick products help customers execute their digital media strategy more effectively.

doubleclick
by Google

JICWEBS
www.jicwebs.org

Joint Industry Committee for Web Standards

JICWEBS

Product Principles

Content Verification (CV) Products

Version 1 2012

Issued January 2012

JICWEBS Content Verification (CV) Product Principles.

This document sets out 10 principles that have been approved by JICWEBS. The principles have been developed following our testing of 8 CV Products which took place in October-November 2011 and replace those principles put forward in May 2011.

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   A page which has rapidly changing content such as a Forum.

4. **Block the serving of advertising on to domains and sub-domains, deemed inappropriate by the advertiser.**
   An inappropriate text string in the domain or sub-domain name such as http://inappropriate.com OR http://inappropriate.safesite.com

5. **Block the serving of advertising on to pages which contain words in the URL, deemed to be inappropriate by the advertiser**
   An inappropriate text string contained within the URL such as http://normal.com/okay/inappropriate.aspx)

6. **Block the serving of advertising on to aliases of an URL or domain, deemed to be inappropriate to the advertiser.**
   A URL may look like http://normal.com/safe.aspx but the page that is displayed is http://inappropriate.com/unsafe.aspx

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   If the product requires JavaScript to be enabled by a browser for it to make a decision as to whether the content is appropriate or not, does it block the serving of ads if JavaScript is disabled?

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10. **Be configurable to block the serving of advertising to any URL not previously checked as safe, until the status is known, if identification of content is not in <u>real time</u>.**

The objective of ABC's test programme is to verify whether a CV Product is capable of meeting claims in relation to some or all of the principles above. For the purpose of ABC testing note:

1) *Capable* is defined as once configured; the product consistently blocks or serves ads under different scenarios during the period of testing.
2) *Blocking, in real time* refers to the decision to serve or not serve the ad and not any spidering or pre-classification activity.

ABC Test Programme Caveats:

ABC's audit opinion confirms only that the CV Product is capable of preventing ad delivery when **configured correctly** (with certain exceptions as stated below) on Inappropriate Content, but does not guarantee that no ad will ever be served onto an inappropriate site when the CV Product is used in real life. The following specific caveats must also be noted:

- Testing is at a point in time and on a limited scale.
- ABC will test that the CV product hasn't been configured to block serving of ads in all tests by default

- The test programme does not verify the scalability of the product.
- The context of testing does not fully reflect real life conditions such as multiple campaigns running in multiple sites.
- The test programme does not verify implementation times required in real life.

- The test programme only verifies that the product blocks on the basis of HTML text and URLs. It does not verify that the product blocks all content formats, particularly non-HTML (e.g. AV content, images etc.).
- The scope of ABC's opinion is limited to English-language content.
- Testing is carried out on **one** specified version of the CV product.
- Testing does not examine any impact that the CV product may have upon campaign delivery.

Changing How the World Sees Digital Advertising

vCE™ CHARTER STUDY REVEALS HOW VALIDATED ADS ARE IMPACTING THE FUTURE OF DIGITAL AND CROSS-MEDIA MEASUREMENT

MARCH 2012

LINDA ABRAHAM Co-Founder, CMO & EVP of Global Development

ANNE HUNTER SVP, Advertising Effectiveness

ANDREA VOLLMAN Marketing Director

comSCORE.

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Introduction

Across the globe, digital media has become an important component of every advertiser's marketing mix. According to the Interactive Advertising Bureau (IAB), display-related advertising spending in the United States (U.S.) reached $10 billion in 2010 and has grown at 20%+ rates since then, far exceeding the growth of traditional media. Just as we've seen tremendous growth in terms of the volume of digital advertising, the landscape itself has also experienced a massive evolution. From new ad formats and placement strategies to new delivery systems and ad technology, it has become challenging for players across the industry to stay up-to-speed.

Until now, digital advertising measurement has not kept pace with the complexity of these changes. The transactional focus has been on measurement of gross impressions delivered, as opposed to those that were actually seen by consumers in a particular target. As a result, marketers have been limited in their ability to understand how online advertising works, especially when compared to other media channels. This lack of understanding has resulted in reluctance by many marketers to fully embrace digital advertising. From publishers to ad networks and from marketers to agencies, key players in the space are calling for more transparency and greater accountability as it relates to online ad delivery.

Addressing this industry-wide call-to-action, the IAB, the American Association of Advertising Agencies (4As) and the Association of National Advertisers (ANA) – each representing a key constituent group in the advertising market – jointly launched an initiative called, *Making Measurement Make Sense* (3MS). Simply put, 3MS's goal is to improve, standardize and simplify digital media measurement. In order to reach this goal, 3MS has published guidelines and is conducting research to help address issues surrounding ad delivery, measurement and validation.

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Validated Campaign Measurement

In January 2012, comScore released a breakthrough innovation to the marketplace that addresses many of the guidelines outlined in the 3MS initiative as well as some additional industry issues relating specifically to ad delivery validation. This solution, validated Campaign Essentials™ (vCE™), provides an unduplicated accounting of impressions delivered across a variety of dimensions, helping to significantly improve the value of online advertising.

vCE validates whether or not impressions delivered as part of a campaign were:

- 👁 In-view (i.e. viewable by an actual consumer)
- 🌐 Delivered in the right geography
- ✖ Seen in brand safe environments
- 🚫 Absent of fraud

👤 In addition, vCE evaluates the demographic and behavioral composition of the campaign audience, enabling the advertiser to assess the degree to which validated impressions reached the desired campaign targets.

Importantly, vCE gleans all this information via a single ad tag, thus enabling a comprehensive, but holistic, view of digital ad delivery that is unique to the marketplace. The use of a single ad tag is a critical component of this measurement approach as it evaluates all impressions consistently and applies validity conditions simultaneously. This eliminates all issues associated with duplicated measurement and offers a more accurate view of campaign delivery. Duplication and inconsistency typically arise when disparate data-collection sources are merged, which can dramatically impact the quality of the analyzed data.

The vCE Charter Study

To better understand issues associated with display ad delivery and validation, and to test-drive vCE, twelve leading marketers participated in a U.S.-based charter study, called the vCE Charter Study.

The eye-opening findings help to pave the way for a more accurate measure of campaign delivery that relies on validated impressions, rather than served impressions (or gross impressions), which are currently the established currency for online ad measurement. Validated impressions can also be used to report validated gross and target rating points (vGRP/vTRP).

Ideally, this research will help to promote the broad adoption of new standard measures that reflect the true delivery of a campaign (per the 3MS guidelines), and it will also help to generate greater visibility and transparency across the industry and across media. Throughout 2012, similar charter programs will be rolled out in other global markets, including Canada, Latin America, Asia and select European countries.

PARAMETERS AND METHODOLOGY
Study Participants:

Kellogg's   Ford   Sprint   kraft foods   Kimberly-Clark   Allstate   E*TRADE   DISCOVER   hTC   CHRYSLER

Time Period: December 2011
Total Campaigns: 18
Media Placements: 2,975
Site Domains: 380,898
Ad Impressions: 1.8 billion
Format: All ads were display, delivered via iframes.

Importantly, 100% of the vCE Charter Study ad impressions were delivered in iframes, including a majority of 'cross-domain' iframes. The definition of these iframes is discussed in the In-View section of this paper, but it is important to note that this is the first industry study to measure and report on in-view rates for ads delivered via all iframes, including those delivered via the notoriously difficult-to-measure cross-domain iframes.

For the purposes of this report, all findings are presented in aggregate, not by individual campaign, to protect the confidentiality of client data. Findings are reported by total campaign as well as by publisher-level, placement-level and/or creative-level.

It should also be noted that because vCE Charter Study participants included major branded advertisers, who inherently buy more premium inventory than the average online marketer, the study findings are not necessarily representative of the overall online advertising market. In fact, because these advertisers generally engage in high-end, premium campaigns, the findings may represent 'best-case scenarios,' rather than the norm.

KEY METRIC DEFINITIONS

In-view: In-view is defined as an ad impression with at least 50% of the ad's pixels in the user's viewport for one second or more. This definition is consistent with current working standards outlined as part of the 3MS initiative. The parameters for the definition of in-view can be easily changed to accommodate any change in industry standards.

Audience: Using the comScore panel of 2 million global consumers, comScore is uniquely qualified to report on audience delivery with person-level insights. This means the study was able to validate delivery to target audiences based on traditional demographics as well as more than 80 behavioral segments.

Geography: Geographic validation is measured by country on a global basis. Although vCE is available globally, with regional data available in some countries, for the purposes of the vCE Charter Study, all campaigns were validated based on delivery in the U.S.

Brand Safety: Ads delivered on sites deemed not appropriate for brand advertising due to objectionable content are considered to be in violation of brand safety. The definition of objectionable content is further discussed within the Brand Safety section of the paper.

Fraud: Fraud was measured by counting ad impressions served to non-human agents as per the IAB spiders and bots list as well as ads that were served to users via illegitimate methods or content. Although there are several other types of fraud detections, these two very basic types were included in the vCE Charter Study to establish a baseline.

The goal of the vCE Charter Study was to quantify the incidence of sub-optimal ad delivery across these key dimensions for the advertised brands, and in so doing, frame the relative importance of each for the industry. Although vCE offers the ability to optimize campaigns in-flight in order to eliminate waste and generate better advertising outcomes, this feature was not deployed for the purposes of the study, as it would detract from the study's objective of determining a baseline of delivery prior to in-flight optimization.

Executive Summary of Findings

1 In-View Rates are Eye-Opening

The study showed that 31% of ads were not in-view, meaning they never had an opportunity to be seen. There was also great variation across sites where the campaigns ran, with in-view rates ranging from 7% to 100% on a given site. This variance illustrates that even for major advertisers making premium buys, there is a lot of room for improvement.

2 Targeting Audiences Beyond Demos Can be Powerful

Generally, campaigns that had very basic demo targeting objectives performed well with regard to hitting those targets. For example, those with an objective of reaching people in a particular broad age range did so with 70% of their impressions. Predictably, as additional demographic variables were added to the targeting criteria (i.e. income + gender), accuracy rates of the ad delivery declined. However, the results also showed that, on average, 36% of all impressions in a campaign were delivered to audiences with behavioral profiles that were relevant to the brand (i.e. consumers with demonstrated interests in categories, such as food, auto or sports). One campaign had 67% of its impressions viewed by the target behavioral segment, demonstrating that targeting to people based on interests or behaviors holds strong potential.

3 The Content In Which An Ad Runs Can Make or Break a Brand

Of the campaigns analyzed, 72% had at least some impressions that were delivered adjacent to objectionable content. While this did not translate to a large number of impressions on an absolute basis (141,000 impressions across 980 domains), it is important to note that 92,000 people were exposed to these impressions. This demonstrates that even with the most premium of executions, brand safety should be an utmost concern for advertisers.

4 Fraud is the Elephant in the Digital Room

Fraud is an undeniably large and growing problem in digital advertising. The results showed that an average of 0.16% of impressions across all campaigns was delivered to non-human agents from the IAB spiders & bots list. Although this percentage might appear negligible, there are two important considerations to keep in mind. Only the most basic forms of inappropriate delivery were addressed in this study. When additional, more sophisticated types of fraud are considered, the problem will only get larger. Like brand safety, fraud should be an important concern for all advertisers.

5 Digital Ad Economics: The Good Guys Aren't Necessarily Winning

The study showed that there was little to no correlation between CPM and value being delivered to the advertiser. For example, ad placements with strong in-view rates are not getting higher CPMs than placements with low in-view rates. Similarly, ads that are doing well at delivering to a primary demographic target are not receiving more value than those that are not. In other words, neither ad visibility nor the demographic target delivery is currently reflected in the economics of digital advertising.

In-View

DEFINING IN-VIEW

One of the most fundamental aspects of advertising measurement, particularly as it relates to cross-media, is the need for a solid and consistent method of determining whether a consumer had an opportunity to see (OTS) an ad. In television, once an ad is delivered in a program, it plays, meaning that the consumer had an opportunity to see it. While the person might not have been in the room to see the ad, the industry accepts the notion that the opportunity was still there and therefore it gets counted as such. Alternatively, if the television is turned off, there isn't an opportunity for it to be seen.

The advertising industry has accepted OTS as a standard metric, which many rely on to build cross-media campaigns and to assess the effects of advertising across channels. This metric is particularly important based on the very simple fact that:

> If an ad does not have an opportunity to be seen by a real user, then it cannot possibly deliver its intended effect.

When compared to other forms of media, digital advertising has unique characteristics relating to an ad's opportunity to be seen. To date, the standard has simply been to measure whether ads were served to a page. However, there are many reasons why a served digital ad might not result in someone having an opportunity to see it. For example, consumers often land on a particular page and then quickly scroll down to consume content before the banner ad at the top of the page had a chance to load. An alternative scenario is when a user remains at the top of the page, never scrolling to the bottom

where many ads have loaded. Given these scenarios, which inherently result in many ad impressions being delivered but not seen, the industry has begun to evaluate ways to accurately measure viewability and to improve in-view rates to avoid wasted ad spend. 3MS proposed a standard definition of in-view, which states that at least 50% of the pixels of the ads must be in-view for a minimum of 1 second.

Aside from adhering to the 3MS proposed working definition, viewability measurement must also account for all ad delivery formats in order for it to be accurate. There are three distinct ad delivery formats from which publishers can choose to deliver ads, and these are:

FORMAT I
Delivery of an ad directly on a publisher site:
In this instance, the publisher places a JavaScript ad tag on its page with the marketer's ad tag in the same domain as the site content.

FORMAT II
Same-domain ('friendly') iframes:
Many sites choose to use an iframe to deliver advertising on their site, as it can help to prevent any unwanted content associated with the ad from damaging the main site content. Same-domain iframes, also known as friendly iframes, typically refer to instances when a site allows the iframe to communicate directly with rest of the page, which in turn, facilitates the measurement of the iframe location when the page is rendered on the viewable screen. This helps to determine whether the ad is in-view and for how long.

FORMAT III
Cross-domain ('unfriendly') iframes:
If a site chooses not to allow the ad to communicate directly with the page, it reserves a place for it in an iframe, which

calls a third-party domain to serve the ad. This severed communication link presents a daunting challenge to the measurement of the iframe's position on the page, and, therefore, ad visibility.

The vCE technology is unique in the marketplace as it is the first and only that can see through cross-domain, or unfriendly, iframes, which means that vCE's in-view rate accounts for all ad delivery formats.

This is particularly important given that comScore research shows that 61% of iframed ads are delivered via these unfriendly iframes. To demonstrate the value of this patent-pending technology, 100% of the ads served in the vCE Charter Study were delivered via iframes.

IN-VIEW BY CAMPAIGN & SITE
Across all campaigns in the vCE Charter Study, the average in-view rate was 69% (See Figure 1). The in-view rates by campaign, however, showed significant variation – with a range of 55% to 93%. This indicates that, on average, 3 out of 10 ads were not seen and were therefore wasted.

Figure 1 Percentage of Ads In-View by Campaign

CAMPAIGN	
1	93%
2	85%
3	84%
4	80%
5	76%
6	75%
7	74%
8	73%
9	71%
10	69%
11	68%
12	66%
13	65%
14	59%
15	58%
16	58%
17	57%
18	55%

A site-level view across campaigns revealed even more variation in in-view rates (See Figure 2). On one site, 100% of the ads were in-view. For this particular site, all ads were placed in the center of the homepage and scrolling was not required to reach the remainder of the content. For another site, only 7% of the delivered ads were in-view, meaning 93% of all ads served on that site never had the opportunity to be seen and were therefore completely wasted.

Since only one out of every 14 ads on the site had the opportunity to be seen, if a marketer paid a $1.00 CPM to deliver advertising on that site, the effective CPM would have been $14.00. While a site with a $1.00 CPM may seem like a bargain, when waste levels on the site are as high as 93%, it can effectively become one of the most expensive placements in a media plan.

Figure 2 Percentage of Ads In-View by Site

MINIMUM	AVERAGE	MAXIMUM
7%	69%	100%

TO BETTER UNDERSTAND IN-VIEW RATES, THE RESULTS WERE ANALYZED BY:

- **Placement** *(premium, standard, etc.)*
- **Relative Size of Site** *(overall and within category)*
- **Content Type** *(News sites, Sports sites, etc.)*
- **Ad Size** (300x250, 728x90, 160x600)
- **Position on the Page** *(above-the-fold versus below-the-fold)*

IN-VIEW BY PLACEMENT
Even within a given site, in-view rates can vary significantly by placement.

A traditional content site, for example, ran several vCE Charter Study campaigns. Across the various placement locations on this site, the in-view rate varied from 23% to 95%. The placements appeared to fall into three distinct levels of in-view (See Figure 3).

- The largest number of placements delivered more than 80% of the advertisements in-view—well above the vCE Charter Study average (69%). Such placements could be considered high-viewability inventory.

- Approximately one-third of the placements delivered advertisements between 66% to 75% in-view, which indicates they were on-par with the vCE Charter Study average.

- A small number of placements, however, dragged down the site's average, given their very low in-view rates. With the use of in-flight optimization (which was not deployed for the purposes of the vCE Charter Study), these sub-par in-view rates could have been identified early and removed from the delivery. In addition, these data suggest an opportunity for this publisher to reconfigure the page layout to ensure that more advertisements are viewable.

Figure 3 Percent of Ads Delivered In-View for Individual Placements Across a Traditional Content Site

IN-VIEW BY RELATIVE SIZE OF SITE

An important question relating to viewability is how in-view rates vary based on the size of a site. To begin to answer this question, a separate grouping of average in-view rates was created based on site size. Using comScore Media Metrix® rankings within specific content categories (i.e. Sports sites, News sites, Food sites, Health sites, etc.) as a proxy for site size, average in-view rates were calculated based on Top 50, Top 100, Top 500 and long-tail sites by category, and the findings were then analyzed. Within these content categories, in-view levels decreased as the site rankings decreased. In fact, the difference in in-view rates between Top 50 sites versus the long-tail sites was a full 16-percentage points (See Figure 4).

This finding suggests that large sites within a content category do a better job than smaller sites at ensuring the ads they deliver to consumers are actually viewable. Further analysis is needed to identify exactly why this is the case, but a few potential options may include the fact that the quality of the site and the content within a site is stronger on these more popular sites.

IN-VIEW BY CONTENT TYPE

In-view rates also showed variation by content type (See Figure 5). For example, Coupon sites delivered relatively strong in-view rates (89%), whereas Pet sites (27%) struggled, delivering slightly more than a quarter of ads in-view. This variation across categories might, in part, reflect the common layouts among sites in a similar genre.

Figure 4 Percentage of Ads Served In-View within a Given Site Category

% OF ADS IN-VIEW

80%
75%
70%
65%
60%

77%   74%   70%   61%

TOP 50 SITES   TOP 100 SITES   TOP 500 SITES   LONG TAIL SITES (REMAINING 501+ SITES)

Figure 5 Percent of Ads Served In-View by Select Content Types

Figure 5 Percent of Ads Served In-View by Select Content Types

Content Type	%
COUPONS	89%
DIRECTORIES	81%
ENTERTAINMENT - RADIO	73%
ENTERTAINMENT - TV	72%
TECHNOLOGY - NEWS	70%
WEATHER	67%
TEENS	60%
POLITICS	59%
DEPARTMENT STORES	58%
PETS	27%

% OF ADS IN-VIEW

IN-VIEW BY AD SIZE

The most common ad size used in the vCE Charter Study was the Classic Leaderboard (728x90), followed by the Medium Rectangle (300x250), and then the Wide Skyscraper (160x600). The Classic Leaderboard delivered the strongest in-view rates (74%), but there was significant variance across all sites with a range of 7% to 93% using this size. The Medium Rectangle format (300x250) delivered 69% of its ads in-view, and the Wide Skyscraper (160x600) delivered the lowest portion of ads in-view (66%).

Although further research is required to better understand the driving factors for differing in-view rates across ad sizes, one potential cause is the relationship between ad sizes and their typical placement on a web page. For example, Wide Skyscraper ads run vertically along a web page, making it more difficult for 50% of its pixels to be in the user's viewport for at least one second.

Figure 6 Percent of Ads Delivered In-View by Ad Size

Ad Size	%
WIDE SKYSCRAPER (160X600)	66%
MEDIUM RECTANGLE (300X250)	69%
LEADERBOARD (728X90)	74%

IN-VIEW BY POSITION ON PAGE

When discussing viewability, there is a common misperception that ads delivered 'above-the-fold' are seen, while ads delivered 'below-the-fold' are not. While the quality of in-view rates can vary from 'above-the-fold' versus 'below the fold' ad delivery, the vCE Charter Study results help to dispel some of these myths. Surprisingly, the findings demonstrate that some ads delivered 'above-the-fold' were not seen because users quickly scrolled past them before the ad had a chance to load, and alternatively, many ads placed 'below-the-fold' delivered a high opportunity to be seen (See Figure 7).

The implications of these findings are far-reaching, and there are broad applications for both buyers and sellers of online media. Publishers, for example, should monetize all ads on their site that deliver an opportunity to be seen, regardless of where the ad is placed on the site. This might mean that inventory 'below-the-fold' can be priced as premium as long as the publisher can prove it was viewed. Alternatively, marketers can look for inventory that is currently identified as remnant, which still delivers attractive in-view rates. Much of this inventory resides in exchanges and can be better optimized by taking into account its placement-specific viewability potential.

Figure 7 Percentage of Ads In-View by Location on Page

IN-VIEW & COST

Finally, comScore explored the relationship between the cost of the ad and the in-view rate. Eight of the vCE Charter Study campaigns provided cost data for use in the analysis. Some campaigns were branding-oriented, while others were direct response. In total, 300 unique ad placements had accompanying CPM data.

The analysis showed there is virtually no correlation between the CPM paid for the ad and whether it was in-view (correlation coefficient = 0.19). This low correlation clearly demonstrates that sites with the ability to garner strong in-view rates are not being compensated fairly. Without solid in-view data, current pricing fails to account for differentials in in-view rates. Understanding the actual delivery by both site and placement is critical for marketers seeking to value media based on its ability to reach a real user.

Publishers and marketers with detailed in-view data are better able to value the placements that provide true value and price them accordingly.

Figure 8 Correlation of In-View Rates & CPM

Audience

DEFINING TARGET AUDIENCE

Marketers invest in digital with the goal of buying ads that are more successful than traditional media at reaching a desired audience. Unfortunately, the extent to which an ad reaches its target can vary greatly based on many factors. The comScore vCE Charter Study evaluated audience delivery in two separate, but important, ways:

Traditional Demographics

Delivery of ad impressions to traditional demographic targets, including age, gender, household income and the presence of children in the home.

Behavioral Segments

Delivery of ad impressions to behavioral segments based on observed online behaviors (i.e. food enthusiasts, sports fans, etc.).

Validating ad delivery based on traditional demographics is the most common approach. However, understanding how well an ad reached a relevant behavioral target is potentially more valuable, since it offers perspective on not just who the person is but on what they are interested in, especially as it relates to the advertised product.

To evaluate the accuracy of ad delivery, vCE Charter Study participants identified their target audiences for each campaign, which could include one or any combination of the traditional demographic attributes as well as behavioral segments. Behavioral segments are comprised of the heaviest consumers (top 50%) of topic-specific Web content (i.e. sports, food, cars, personal electronics or travel). vCE Charter Study participants identified a primary behavioral attribute from 80 different online behavioral profiles.

Figure 9 illustrates the most popular desired attributes across all campaigns in the vCE Charter Study. The majority of campaigns included age in their target set, which is not surprising given its wide use as a desired attribute across all forms of media. Interestingly, however, the ability to reach a behavioral attribute was the next most common approach, demonstrating the growing importance of some marketers' desire to reach people based on more than demographics. It should be noted that the use of behavioral campaign reporting is relatively unique to digital and certainly a compelling value proposition for marketers trying to connect more closely with consumers who exhibit interests that are aligned with and/or related to the advertised brand.

Figure 9 Percent of Charter Campaigns Using Desired Attribute(s)

AGE	BEHAVIORAL SEGMENT	GENDER	HOUSEHOLD INCOME	PRESENCE OF CHILD
94%	50%	44%	6%	6%

AUDIENCE TARGETING BY TRADITIONAL DEMOGRAPHICS

Across all vCE Charter Study campaigns, there was quite a bit of variance in their ability to reach the desired target audience. As one might imagine, the more complex the target (i.e. the more demographic targeting variables included in the target set), the more difficult it was for the campaign to deliver on its promise (See Figure 10).

Campaigns with a target audience that included one demographic variable (e.g. 25-54 years old) delivered impressions to the target an average of 70% of the time. In cases where there were two variables (e.g. women + 25-54 years old), the accuracy of targeting decreased to an average of 48%, and with three variables (e.g. women + 25-54 years old + with children under 18 in the home) the average was 11%.

Figure 10 Percent of Ads in Demographic Target Based on Number of Targeting Variables*

Demographic variables can include: age, gender, household income and/or number of children in the household. Due to sample size, a meaningful range could not be calculated for campaigns with 3 demographic variables.

AUDIENCE TARGETING BY BEHAVIORAL ATTRIBUTES

In addition to looking at the audiences in terms of their demographics, online behaviors of people who were exposed to the campaign were also measured. The campaigns were measured against their desired behavioral attribute at the campaign level. In some cases, specific cookie-based behavioral targeting was used in several placements in the campaign. In other cases, marketers wanted to reach their desired behavioral audience through traditional media placements, such as delivering an ad alongside content of interest to their audience. Across all campaigns,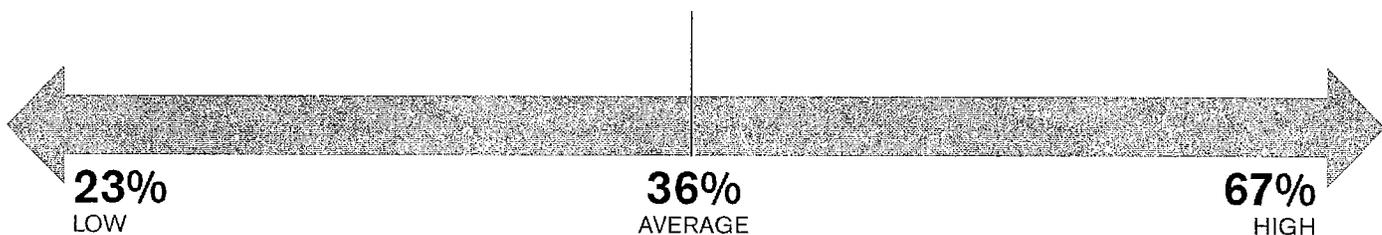 the average campaign reached its behavioral audience target 36% of the time, with a wide range from 23% to 67% (See Figure 11).

One obvious conclusion from this finding may be that online behavioral targeting has limitations as an accurate or effective means of reaching audiences online. However, if executed correctly, behavioral targeting can be a very powerful, efficient and effective means of delivering a brand message to a valuable audience.

One primary reason for these limitations includes the cookie-based nature of behavioral segmentation. For example, while a user may have visited a travel site that shared its information with data providers on the basis of the cookie for that browser/machine combination, there is no guarantee that when that cookie is observed later at some other site, that it represents the same user. Another reason relates to the freshness of the information. Someone may have visited a travel site six weeks ago, but they are no longer active in travel research. Finally, one visit alone may not be sufficient to identify a serious travel intender. As a result, one must be careful about the accuracy of the targets they purchase, which is precisely why audience validation and in-flight optimization should be a critical part of the campaign management process. If these campaigns were to have leveraged in-flight optimization (which they explicitly didn't for the purposes of the research), it is likely that these numbers would be dramatically higher.

Figure 11 Percent of Ads Delivered to the Primary Behavioral Attribute by Campaign

23%
LOW

36%
AVERAGE

67%
HIGH

comSCORE.

It is also important to note that, in some campaigns, the behavioral attribute target actually did a much better job at delivering on-target impressions than the demographic group, suggesting that using demographics alone to evaluate the success of campaign delivery is not sufficient. For example, one campaign for a CPG-product that had a demographic target of women between the ages of 25-54 years old, only served 37% of impressions to that group. However 67% of the impressions went to people who were heavy users of food and cooking content online. With demographic-based evaluation alone, this campaign delivery would have appeared unsuccessful.
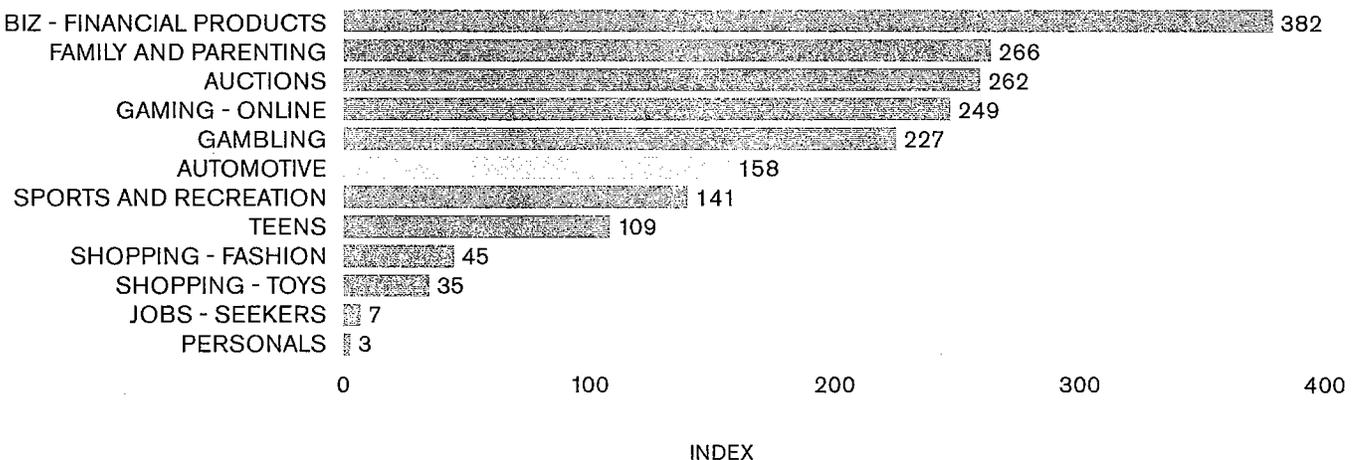
A separate analysis of an Automotive campaign in the vCE Charter Study helps to shed light on the value of behavioral campaign reporting and its ability to reveal a deeper portrait of the type of consumer exposed to the campaign. The analysis involved creating an index of visitation to online site categories for consumers exposed to the ad campaign compared to the average Internet population. The findings revealed that the exposed group over-indexed (158) on automotive content, meaning the audience reached by the campaign was 58% more likely than the average Internet user to be a significant consumer of online automotive content (See Figure 12). This is a positive indication that the campaign reached the right audience regardless of the demographic composition.

Another important finding was that the audience reached in this campaign also over-indexed significantly in categories relating to Financial Products (382) and Family and Parenting (266). This information can be used to develop creative messaging that speaks to the interests of the audience, such as showcasing a family vehicle or financing information in ads.

Again, it is important to note that for the purposes of the vCE Charter Study, these campaigns were not optimized in-flight, meaning that no corrective action was taken throughout the course of the campaign to improve the extent to which these ads were able to reach their target audience. With in-flight optimization, it is highly likely that all campaigns would have seen improved on-target delivery rates for both their demographic and behavioral targets.

Figure 12 Index of Online Behavioral Activity by Category for Consumers Exposed to an Automotive Campaign

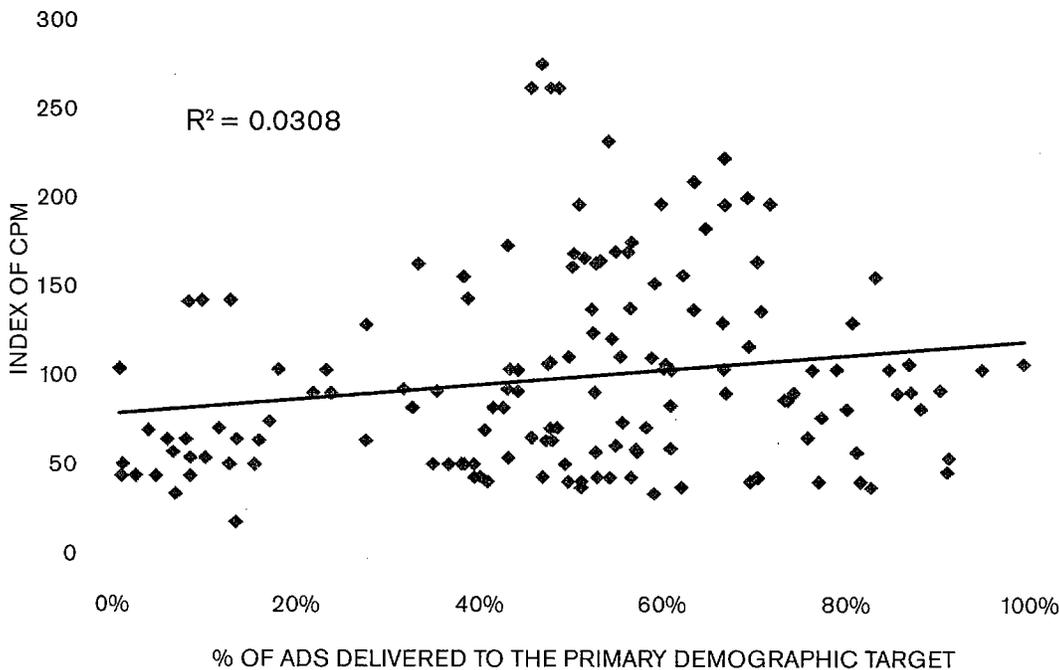| Category	Index
BIZ - FINANCIAL PRODUCTS	382
FAMILY AND PARENTING	266
AUCTIONS	262
GAMING - ONLINE	249
GAMBLING	227
AUTOMOTIVE	158
SPORTS AND RECREATION	141
TEENS	109
SHOPPING - FASHION	45
SHOPPING - TOYS	35
JOBS - SEEKERS	7
PERSONALS	3

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AUDIENCE TARGETING & COST

Using available CPM data (as outlined in the prior In-View section), the correlation between CPMs and the accuracy of demographic targeting (primary audience only) was analyzed as part of this research. The findings revealed a very small correlation (correlation coefficient = 0.18), suggesting that there is little or no relationship between the amount paid for an ad and its ability to reach the desired demographic target audience.

Before drawing macro conclusions about this finding, it is important to examine some of the potential reasons for this lack of correlation between these two variables. First, some marketers might simply not be building campaigns with the core objective of reaching a specific demographic, and instead they are buying media based on its ability to hit certain behavioral segments.

Another very real issue is the accuracy of cookie-based targeting data. As noted above, there are a myriad of companies that provide this data, and there is very large variation in the quality of the data. Unless cookie-based audiences are verified against a credible third-party source, it is possible that they are missing the mark. In the vCE Charter Study, demographically-cookie targeted ad placements reach their desired demographic 14% to 96% of the time. This indicates a wide variation on the quality of demographic cookie data.

Regardless of the cause, it is clear that, at present, the market is not rewarding ads that deliver to the intended audience compared to those that did not. This represents an opportunity for both advertisers and publishers, especially now that they have transparency into the accuracy of delivery and the ability to optimize in-flight to avoid waste.

Figure 13 Correlation of % of Ads Delivered to Primary Demographic Target & CPM

$R^2 = 0.0308$

INDEX OF CPM

% OF ADS DELIVERED TO THE PRIMARY DEMOGRAPHIC TARGET

⊕ | Geography

DEFINING GEOGRAPHIC TARGET

When delivering ads on television, it's relatively easy to ensure they run in their desired geographic market, because broadcast markets have defined geographic borders. The Internet, on the other hand, is borderless and users can access specific content from anywhere in the world. As a result, controlling geographic distribution of advertising can be challenging. For marketers trying to maximize every dollar of their advertising budget, it is critical that their ads are delivered in the desired market where their products are actually sold. Accordingly, geographic validation was an important component of the vCE Charter Study.

GEOGRAPHIC TARGETING: OVERALL & BY CAMPAIGN

All campaigns in the vCE Charter Study had a geographic target of the U.S., and in total, about 4% of impressions were delivered outside of the U.S. Of impressions delivered outside of the target, nearly half were served in Canada, and the remainder spread across Europe, The Caribbean, Asia-Pacific and Latin America. This finding suggests that a good portion of the wasted impressions were delivered to people living in countries whose native language is something other than English.

Figure 14 Percent of Ads Delivered to Geographic Market Among All Impressions Delivered Outside of North America

When examining the results on a campaign-by-campaign basis, it is interesting to note the large range of impressions delivered outside of the target geography. While one campaign performed flawlessly, another wasted about 15% of its impressions (See Figure 15). Given that the Internet provides a wealth of geo-location information, and given the campaigns' broad target of 'inside the U.S.', this large range is somewhat surprising.
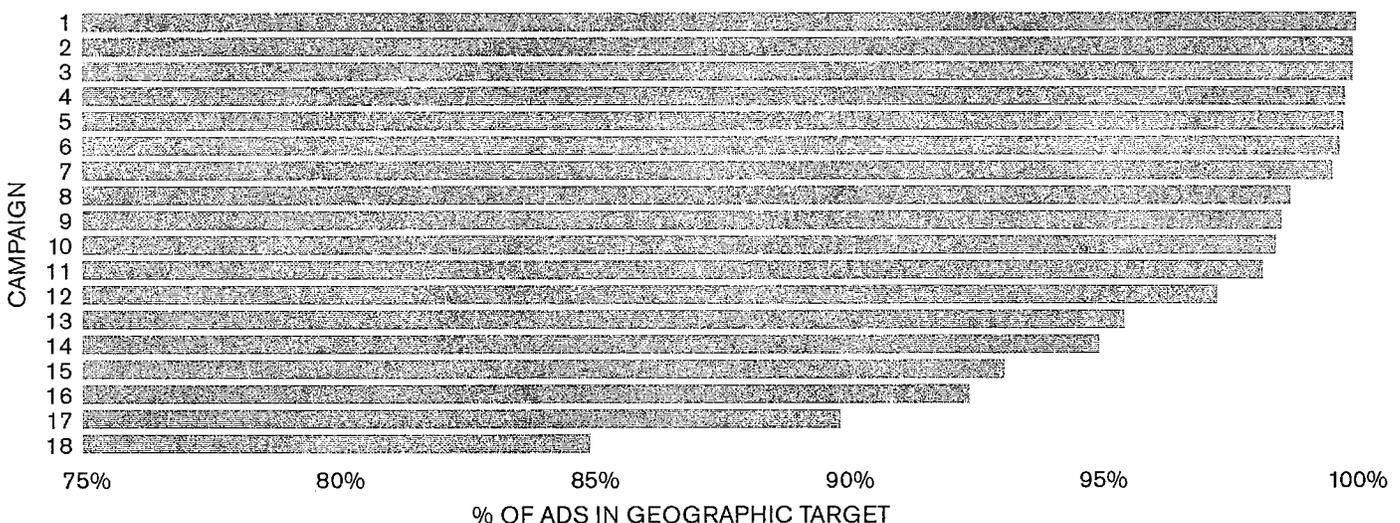
In such cases, the inability for an ad to be delivered in its intended geography is often not a result of poor targeting capabilities, but rather due to error in complex ad buying and selling processes. Delivery of ads outside a given geographic target often occurs for two primary reasons:

The first reason is simple

communication error. In some cases, the site serving the ad is not aware of the intended geographic target. This occurs when the requirement does not appear on the insertion order (IO), which authorizes the purchase of impressions from the site and determines the characteristics of the ads to be served. Such misfires can be easily remedied by ensuring geographic requirements are a standard part of IO contract templates.

The second reason is due to human

error. To target an ad to a given geography, the requirement must be programmed in the ad server that is delivering the ad. Occasionally this step is missed by the publisher, or in rare cases, the wrong geography is inadvertently selected.

Fortunately, there are easy ways to combat these issues. As long as geography is specified in the IO, performance can be optimized in-flight in two different ways. The first is through real-time alerting, which notifies sites when ads are being served outside the desired geographic region so that corrective action can be taken. The second option is to use an ad blocking technology, which can be implemented to prevent ads from being served outside the geographic target altogether. This is generally reserved for instances where serving an ad outside a specified geography may create privacy or legal concerns, and in lieu of in-flight course correction, absolute prevention must be employed. These alert and blocking features can protect both marketers and publishers from wasting inventory and from lowering the overall effect of a campaign. Although neither alerting nor blocking was used in the vCE Charter Study, both of these features are part of the comScore vCE offering.

Figure 15 Percent of Ads Delivered In Geography by Campaign

% OF ADS IN GEOGRAPHIC TARGET

Brand Safety

DEFINING BRAND SAFETY

A major concern of all marketers is the relevance of the content in which their ads are delivered. When brands spend money on advertising, they need assurance that their ads will not run next to content that is at odds with the brand they are trying to build or the equity they have already established.

In this context, 'objectionable content' can generally be categorized into two buckets, the first being rather objective and the second being much more subjective and brand-specific:

Type I: Adult-Content and/or Hate Sites

Almost all brands want to avoid having their ads run on Adult-Content or Hate sites. Although there might be some differences of opinion on exactly what sites fall into these categories, there are generally agreed upon and industry-endorsed lists that define these, and almost without exception, reputable marketers want to avoid them at all costs.

Type II: Brand-Specific Criteria

There are topics, issues and/or content that certain brands don't want to advertise near because it directly conflicts with and/or detracts from the advertising's objective. For example, consider a major airline. For obvious reasons, an advertiser in this space might not want the brand's ad to appear next to an article about significant plane delays. Meanwhile, for countless other advertisers, delivering an ad to a consumer in this content would be completely benign.

Concerns relating to both of these categories are very legitimate. Unfortunately, though, due to the complex chain of online ad delivery through ad networks and exchanges, it is not always clear where an ad will appear.

BRAND SAFETY ON ADULT-CONTENT AND HATE SITES

To begin to understand the extent to which ads are delivered in content deemed inappropriate, the vCE Charter Study quantified the incidence of ad delivery on Adult-Content and/or Hate sites (Type I). The study used a standard definition of 'objectionable content', based on historical data of sites/categories most commonly identified as being 'not brand safe' by leading advertisers (See Figure 16). The measurement was applied to all campaigns.

Figure 16 Categories Deemed "Not Brand Safe" for Purposes of vCE Charter Study

- Piracy and Copyright Theft
- Anonymizer
- Child Abuse Images
- Criminal Skills
- Hacking
- Illegal Drugs
- Marijuana
- Spam URLs
- Botnet
- Command Control Centers
- Comprised and Links to Malware
- Malware Call-Home
- Malware Distribution Point
- Phishing/Fraud
- Spyware and Questionable Software
- Peer-to-Peer
- Torrent Repository
- Hate Speech
- Pay to Surf
- Nudity
- Pornography
- Sex and Erotic
- Content Server
- Private IP Address
- Redirect

72%
of the campaigns had at least some impressions served in inappropriate content, which spanned a total of 980 sites.

To the surprise of many advertisers in the vCE Charter Study, 72% of the campaigns had at least some impressions served in this type of inappropriate content, which spanned a total of 980 sites (See Figure 17). The good news is that the actual percentage of impressions involved was quite small, less than .01%. However, the study also showed that 92,000 people saw these ads, meaning that if some of these people were either loyal or prospective customers, it could be counter-productive and/or problematic for the brand.

It should be noted that it is likely that this number is much higher when evaluating the broader, online advertising universe as there are certain factors that may have positively influenced the low percentage of inappropriate ad placements in the vCE Charter Study. These factors include:

- The brands under measurement were premium national marketers and therefore more likely to use higher quality content

- Many of the brands were already employing ad blocking technologies from external third-parties. Even with these technologies in place, several instances of inappropriate placements still appeared.

- In a few instances, select demand-side platforms chose to obfuscate the URLs

where the ads were run, meaning that brand safety could not be measured and clients could not validate where the ads were run.

Despite the relatively low overall incidence of ads appearing next to inappropriate content, these findings still might be unsettling to advertisers. Even one ad impression delivered in the wrong environment can damage a valuable consumer's feelings toward a brand. With the increasing use of social media, a snapshot of a marketer's ad in an inappropriate environment can quickly go viral, exposing many more people to the unintended, but negative, association of a brand and inappropriate content. With 92,000 people being exposed across all vCE Charter Study campaigns, the advertisers' concerns are justified.

The daily alerts and blocking technology discussed in the geography section of the report can also be deployed for Type 1 and/ or Type 2 content sites. Real-time alerts can be set to notify publishers, marketers and/ or agencies if an ad is appearing in content deemed 'not brand safe.' In addition, the technology can completely block the ad from being served in certain environments. The definition of what is brand safe can be customized by the brand.

Figure 17 Percent of vCE Charter Study Campaigns with Impressions Delivered Next to Content Deemed "Not Brand Safe"

28%

☒ SOME ADS IN INAPPROPRIATE CONTENT
■ NO ADS IN INAPPROPRIATE CONTENT

92,000 PEOPLE EXPOSED TO Adult-Content and/or Hate Sites

Ⓧ Fraud

The complicated daisy chain of ad delivery can involve up to 20 different players, and quite often neither the buyer nor the seller has insight into each step in the process.

DEFINING FRAUD

Today's world of online advertising involves many players in the ecosystem, each with a specific role and goal. However, the inherent complexity in this landscape results in a lack of control and visibility into online ad delivery. While the vast majority of individuals in the digital advertising ecosystem operate with the best of intentions, like any industry, there are fraudulent players that can disrupt the value chain. The complicated daisy chain of ad delivery can involve up to 20 different players, and quite often neither the buyer nor the seller has insight into each step in the process.

The term 'fraud' as it relates to online advertising encompasses a variety of impression-delivery scenarios. In some cases, there is direct fraud, which is deliberate and completely illegitimate, while other types of fraud are an unintentional by-product of legitimate business practices. In either case, this fraudulent activity does not deliver ads to actual people as intended, so should therefore be excluded from validated impression counts.

The vCE Charter Study specifically measured two aspects of inappropriate delivery:

1. The incidence of ad delivery via non-human spiders and bots identified by the IAB

2. The incidence of ad delivery on sites with clear illegitimate and intentional fraud

LIST OF NON-HUMAN SPIDERS & BOTS IDENTIFIED BY THE IAB

To help members of the online advertising ecosystem better understand and avoid issues relating to fraud, the IAB maintains a list of all known non-human spiders and bots. All IAB-accredited ad servers are required to filter out these known sources of non-human ad impressions. The use of some of the spiders and bots on this list is a completely legitimate practice employed by many websites for a variety of uses, such as to gather data to help index pages for search engines or to determine page content for the purposes of offering contextual ad placements. Regardless of their use, however, they do not deliver ads to consumers and can therefore wreak havoc on ad delivery and validation, causing a lot of wasted ad impressions and skewing the results of advertising effectiveness measurement. An analysis of vCE Charter Study campaigns showed that the average campaign in the study had 0.16% of total impressions being delivered via these spiders and bots, with a range of 0.03% to 0.49% (See Figure 18).

Figure 18 Percent of Total Impressions Delivered Via Non-Human Spiders and Bots as per IAB List

SITES WITH INTENTIONALLY FRAUDULENT & ILLEGITIMATE ACTIVITY

In addition to known spiders and bots, part of the vCE Charter Study analysis included an evaluation of fraudulent impressions that were intentionally delivered via illegitimate online activity. Campaign delivery was manually reviewed for unusual activity indicative of intentional fraud. Such indicators might be unusually high or unusually low in-view rates or little or excessive mouse movement on the creative. Upon identifying these outliers, further human investigation was used to either confirm or negate the hypothesis.

The analysis revealed more than 200 sites that were guilty of this type of fraudulent delivery. Figure 19 below outlines some of the most common categories of sites with such activity. Additionally, the investigation uncovered that one of the sites delivered almost two million ads in the vCE Charter Study, supporting the need for consistent hygiene on campaigns to accurately measure delivery and ensure only ads that are delivered to actual humans are counted in validation and effectiveness measurement. Again these ads were not blocked from serving for the purposes of this study but instances of delivery were measured.

Figure 19 Custom Categorization of Sites with Intentionally Fraudulent Activity

NUMBER OF WEBSITES WITHIN EACH CATEGORY

While these two categories of fraudulent ad delivery accounted for only a small percentage of total ad impressions in the vCE Charter Study, there are a variety of other sources of fraud that consistently result in significant waste. For perspective, of the approximately 1 trillion URLs that comScore processes each month (40% more than all the traffic of the entire U.S. Internet population), the application of comScore's full suite of fraud detection technologies identified levels of fraud ranging from 3% to 10% for a given campaign. Clearly, no brand is immune from fraud, and it should be an area of concern for all players in the ecosystem.

Implications: Putting all of the Pieces Together

The vCE Charter Study demonstrates that each dimension of ad delivery – viewability, audience targeting, geographic targeting, brand safety and fraud – has a significant impact on whether or not an ad has an opportunity to achieve its intended objective, and should therefore be a central component of ad delivery validation measurement.

Advertisers want to understand ad delivery to each of these core dimensions, and they also require a holistic, un-duplicated view of total campaign delivery. In order to achieve this un-duplicated accounting of delivered impressions, advertisers require a simple solution that eliminates all of the wasted time and error associated with merging disparate data sources. Consider, for example, results from a single campaign in the vCE Charter Study.

IN ONE CAMPAIGN WHEN MEASURED INDIVIDUALLY, THE FINDINGS SHOWED THAT:

38.9% of the ads were delivered to the right target audience

58.0% of the ads were delivered in-view

85.7% of the ads were delivered in the right geography

Figure 20 Intersection of Percent of In-View, In Geography and On Target Ad Impressions Delivered For a Sample Campaign in vCE Charter Study

IN GEOGRAPHY
84.7%

VALID TARGET
33%

IN-VIEW
58.0%

ON TARGET
38.9%

Because of duplication across these three dimensions, one cannot simply sum the percentages, as this would suggest that 155.9% of the ads were delivered according to plan or that 118.4% of the ad impressions didn't deliver well. Instead, through the use of a single ad tag and a single measurement solution, vCE is able to validate that a **combined total of 33% of the ads were delivered according to plan** (See Figure 20).

IMPLICATIONS

Putting all of the Pieces Together

Prior to the introduction of vCE, the technology to validate all campaign impressions against core criteria was not fully available. The vCE Charter Study demonstrates that the technology now exists to identify and correct the source of sub-optimal performance, and that the opportunity to do so is substantial. In fact, in a perfect world, advertisers and publishers can contract and pay on the basis of impressions that were served for the campaign, but have also fully met the validity criteria.

vGRP: A TRULY CROSS-MEDIA COMPARABLE METRIC

In order for marketers to plan, measure and evaluate media across channels, they require digital campaign delivery measurement that can be translated into traditional metrics, like reach, frequency and gross rating points (GRPs). A central component of vCE is the validated GRP, or vGRP. The vGRP provides the industry with a cross-media comparable GRP metric that is also meaningful in the context of how online advertising works.

vGRPs are calculated by removing all ad impressions that did not have the opportunity to make an impact, including those that were not in-view, delivered to the wrong geography, served near brand unsafe content and subject to fraud. Similarly, validated target rating points, or vTRPs, include an overlay of audience-validated data, providing yet another actionable metric for marketers seeking to plan campaigns across channels.

The example below of a CPG brand helps to illustrate how vGRPs can impact the true reach and frequency of a campaign (See Figure 21). In this example, using non-validated impressions, the campaign appears to have delivered 46.7 GRPs. When using validated impressions, however, the campaign delivered 20.7 vGRPs, yielding a vRatio of 44%. This delta between GRPs and vGRPs in digital media demonstrates the volume of waste occurring, and highlights significant areas for improvement.

Figure 21 Gross and validated GRP for a Sample Campaign in vCE Charter Study

	GROSS	VALIDATED	V RATIO
Reach	8.7	4.9	56%
Frequency	5.4	4.2	79%
GRP	46.7	20.7	44%
TRP	61.4	24.5	40%

Conclusion: vCE Charter Study Key Themes

While the vCE Charter Study sheds light across every aspect of delivery, three consistent themes emerged in the findings.

1 Marketers are not necessarily getting what they expect when they buy online ads. From ads delivered next to objectionable content to ads that never had the opportunity to be seen, there are countless examples where the digital medium is simply not delivering on its promise.

2 The way online advertising is delivered varies significantly by site, placement and even creative. Across all dimensions of ad delivery, the vCE Charter Study demonstrated clear examples of situations where ad impressions were largely wasted. These findings suggest that measuring all dimensions of ad delivery for every placement in a holistic fashion is critically important.

3 Regardless of the quality of the buy, there is almost always room for improvement. Advertisers who understand and leverage the power of validation stand to gain much more value from the digital channel.

The digital medium has advanced the discipline of advertising in many respects, but it has also introduced significant complexity to the media equation. To maximize the value of this important medium, it is important to have the tools to ensure the industry regains its footing on some of the aforementioned pitfalls and continues to advance forward. The vCE Charter Study has illuminated many of the ways value is currently being left on the table. Now is the time for advertisers, publishers and other industry stakeholders to realize that value.

About comScore

comScore, Inc. (NASDAQ: SCOR) is a global leader in measuring the digital world and preferred source of digital business analytics. comScore helps its clients better understand, leverage and profit from the rapidly evolving digital marketing landscape by providing data, analytics and on-demand software solutions for the measurement of online ads and audiences, media planning, website analytics, advertising effectiveness, copy-testing, social media, search, video, mobile, cross-media, e-commerce, and a broad variety of emerging forms of digital consumer behavior.

comScore services, which now include the product suites of recent acquisitions AdXpose, Nedstat, Nexius XPLORE, ARSGroup and Certifica, are used by more than 1,800 clients around the world, including global leaders such as AOL, Baidu, BBC, Best Buy, Carat, Deutsche Bank, ESPN, France Telecom, Financial Times, Fox, Microsoft, MediaCorp, Nestle, Starcom, Terra Networks, Universal McCann, Verizon Services Group, ViaMichelin and Yahoo!.

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Using patented Natural Language Processing technology, Amplify™ identifies the significant topics, emotions, intentions and actions contained in text. Our platform delivers real-time XML data that enables advertisers, publishers and ad networks to take the guesswork out of brand safety and targeting decisions.

Topics | People | Brands | Sentiment | Actions | Intentions | Locations | Timescales | Emotions | Age | Gender | Education

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Amplify™

Brand Safety

The growth of social media and massive increase in page impressions from user generated content creates powerful advertising opportunities for brands. But there are risks. How can you monetize the content with confidence?

By analyzing page content in real time and understanding its *actual meaning*, Amplify™ enables advertisers, publishers and networks to take the guesswork out of brand safety. By matching the communication objectives of the advertiser with the precise meaning of the content, Amplify™ generates real-time signals from content that integrates directly with the ad server to exclude ad placements from unsuitable content.

Input: content   Output formats

Spider?

List of brand excluded topics

CMS?

XML/JSON

URL Audit Lists

Dynamic Ad Tags

Fast. Scalable. Accessible.

Whether you are a publisher, ad network, advertiser or solution provider, Amplify™ works alongside your existing CMS or ad server as a web service platform that:

• Requires no client-side technology or infrastructure
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Interactive Advertising Bureau Mobile Local Buyer's Guide

JUNE 2012

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About this Guide: This document was developed by a sub group of the IAB Local Committee which is part of the IAB's Mobile Marketing Center of Excellence with sponsorship by The Weather Channel.

The Weather Channel ®

weather.com

About the IAB's Local Committee: The mission of the IAB Local Committee is to communicate the value of digital local interactive advertising to national and local marketers and to provide tools for publishers to effectively monetize their local ad inventory. A full list of committee member companies can be found at http://www.iab.net/local_committee

About the IAB's Mobile Marketing Center of Excellence: The IAB Mobile Marketing Center of Excellence, an independently funded and staffed unit inside the IAB, is charged with driving the growth of the mobile marketing, advertising and media marketplace. The Mobile Center devotes resources to market and consumer research, mobile advertising case studies, executive training and education, supply chain standardization, creative showcases and best practice identification in the burgeoning field of mobile media and marketing. Our agenda will focus on building profitable revenue growth for companies engaged in mobile marketing, communications and advertising, and helping publishers, marketers and agency professionals understand and leverage interactive tools and technologies in order to reach and influence the consumer. More information and a list of Mobile Center Board and Supporting members can be found at http://www.iab.net/mobilecenter

This document can be found on the IAB website at: www.iab.net/mobilelocal.

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EXECUTIVE SUMMARY

Local mobile is growing faster than any medium ever, for a simple reason: utility. The more mobile devices can do, the more people rely on them to navigate options where they live. And the more advertisers can give them what they want where they are in the moment, whether that's on the street, in the store, in the office or on the couch.

Research and results confirm that people want local ads, offers, information and content. They act on local ads fast. They visit, they explore, and they buy.

The technologies of Geo-targeting are advancing and multiplying rapidly, as are the types of advertising they support. To get the most from local mobile, planners need to approach it as a channel, not a silo; integrate targeting methodologies to balance precision and reach; and align distribution, retailers and customer service to support the chain reaction that local mobile can set in motion. Creative teams need to design for usability, optimizing ads and landing pages for quick views and clean clicks; and creating ads for particular operating systems.
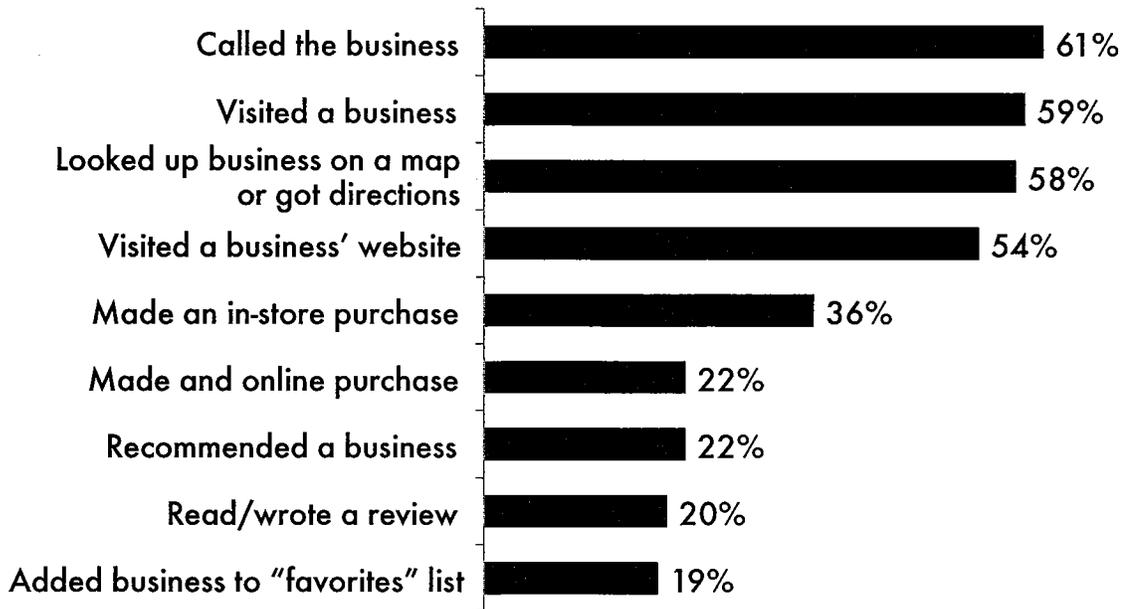
Mobile encompasses a wide array of devices—including feature phones, smartphones, tablets, and eReaders—for which local advertising is available. While much of the guidance in this document is relevant across devices, this buyers guide is focused on ad opportunities related to phones.

INTRODUCTION

Possibly no medium has ever been as multi-purpose as mobile phones have become. The more a phone can do, the more people do with it; and the more they rely on it. More than 234 million Americans over the age of 13 are now using mobile devices (*ComScore, April 2012*). One report says people look at their mobile devices at least 40 times a day (*Google*), while another puts the number at 150 (*Nokia 2010 study, as reported by Tomi Ahomen at Mobile Web Africa Conference, February 2012*); and another says that more than 91% of mobile phone users keep the device within arm's length 24 hours a day (*Morgan Stanley Technology/Internet Trends, 2007*). For many, it's the first thing they check in the morning, the last thing they check at night, and the first impulse when there's a question of where to go, what to do, and what to know.

Fully 75% of mobile users are more likely to take action after seeing a relevant local ad (*JiWire Mobile Audience Insights Report Q42011*). Those who research products on their mobile devices are ready to buy; 70% take action within an hour, while 70% of people on desktop PCs take action within a week (*Microsoft Location Based Services Usage & Perceptions Study*). What's more, 79% of shoppers use their mobile device to shop, and 70% of them use mobile in-store (*Google-IPSOS, The Mobile Movement, April 2011*).

Almost half of all mobile searches are for location-aware information. With smartphones, it's even more: 95% of smartphone users have used their phones for proximity searches on information (e.g., local weather), products and services. Some 61% have contacted a business after accessing that information; and 36% have made a purchase on that connection (*Google-IPSOS, The Mobile Movement, April 2011*).

Actions Taken After Seeking Local Information

Action	Percentage
Called the business	61%
Visited a business	59%
Looked up business on a map or got directions	58%
Visited a business' website	54%
Made an in-store purchase	36%
Made and online purchase	22%
Recommended a business	22%
Read/wrote a review	20%
Added business to "favorites" list	19%

Google-IPSOS, April 2011 (n= 4,757 smartphone Users Who Access Local Content)

The immediacy of local mobile creates active engagement for marketers on two essential levels. The first is advertising to attract people to act locally, buying or using your product or service (whether it's a hotel, a beer, or a credit card). The second is advertising to engage them while they're looking.

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Bottom-line, it works. On average, national brands that add local targeting and contact information to mobile campaigns see click-through rates rise meaningfully. Local ad network xAd reports that local boosts the average click-through on a banner ad by as much as 400% (from 0.17%-0.67% average mobile CTR to +0.7% average), and by as much as 150% on a search ad (from 2.9% average search CTR to 5-8% average).

Local is relative. Local mobile adapts to the scale of an advertiser and campaign, incorporates many technologies, and adjusts to a consumer's situation. For a nationwide brand campaign, local can mean DMA (Designated Market Area) level. For a regional restaurant chain, it may mean enticing people within particular neighborhoods to come and check in for a free dessert.

Local mobile is multi-platform. There are seven principal types of mobile marketing: display advertising, search, video, audio, text messaging and mobile activation, and branded applications.

Location-Based Advertising

Display Advertising	Search	Video	Audio	Text Messaging	Mobile Activation	Branded Applications

- *Display advertising* is messaging that users see when browsing and using applications on a mobile device. Display can incorporate static (text and graphics) and rich media (embedded audio and embedded video).

- *Search* advertising appears when users submit queries in search engines, maps, directories and applications.

- *Video* ads are commercials before, during, or after content—whether that's streaming video, animation, gaming, or music videos in a player environment.

- *Audio* ads are :60, :30 or :15 second audio clips delivered in-stream, typically between songs in mobile music apps, often with companion mobile display ads.

- *Text messaging*, or SMS (Short Message Service), can contain up to 160 characters and can be transmitted instantaneously. More than 95 percent of mobile phones are capable of receiving SMS. Nearly all mobile phones now support MMS, or multimedia messaging, which incorporates sound, photos and video.

- *Mobile activation* enables traditional media (print, TV, radio, outdoor) to generate digital interaction. Audiences can be directed to text SMS short codes to register for promotions, vote on contests and entertainment (e.g., *American Idol*), support causes, and more. Similarly, QR codes can direct a device's browser to a specific URL that provides information, registers users for events, and even automatically adds information to device calendars and address books.

- *Branded applications* are apps that marketers create and offer for download in an app store (e.g., Apple App Store, Google Android Marketplace). Advertisers across a wide range of categories—from retail to media to packaged goods—can create mobile apps that perform a service or provide information and entertainment.

Local mobile is a push and pull proposition. Mobile campaigns can involve push and pull messaging. Push messaging requires a database of mobile consumers who have opted in, or agreed to receive messages; so it predominates in loyalty campaigns. Pull messaging works as part of a larger media campaign aimed at customer acquisition, where ads in various media prompt users to respond to a call to action.

Local mobile is dynamic. Technologies are continually being developed to refine all of the elements that make location-aware advertising productive. As the science behind geo-targeting advances, there are more ways to identify where mobile users are located and serve up relevant information and offers. As the related science of attribution emerges, there are more ways to track the effect of mobile advertising beyond the click to a range of secondary actions—from requests for information to retail check-ins, to access to maps and driving directions, to online purchases and calls.

Mobile's instant connection makes the medium an activator for local advertising campaigns. Indeed, mobile produces its most powerful results when incorporated within a cross-media campaign. The keys for media buyers are grounding in the definitions of the new language, understanding the principles for effective incorporation of the medium into an overall plan, and tailoring advertising to the way the medium is actually used.

MARKET OVERVIEW

Mobile will be a defining medium, due in large measure to its utility. By way of comparison, the mobile market is growing as fast as radio and television—the two defining media of the 20th Century—did at inception.

Technology Adoption (Measured by Population Penetration) in USA
Radio vs. TV vs. Internet vs. Mobile Internet, 1920 – 2011E

Source: Radio penetration data per Broadcasting & Cable Yearbook 1996, Internet penetration data per World Bank / ITU, Mobile Internet (smartphone) data per Morgan Stanley Research, 3G data per Informa.

Chart published in KPCB Internet Trends 2011 (full report: www.kpcb.com/internettrends2011)

In the U.S., more people now access the Internet via phone than via computer. Fully 78% of Americans go online from a handheld, whereas only 68% surf from a computer *(Google)*. In the U.S., 90% of mobile users have a phone that can access the Internet, and 25% of users access the Internet mostly on mobile devices (*Pew Research, 2011 Spring Tracking Study*).

Estimates on the size and expansion of local mobile advertising vary widely—from $4.4 billion to $24.4 billion in 2016, for example—but the single fact remains that the market is growing faster every year. What's more, the mobile market (feature phones, smartphones, and location-enabled devices) is expected to eclipse the desktop universe rapidly. One estimate puts mobile at 88% of all local online marketing by 2016, versus only 6.3% in 2011 *(Borrell Associates, 2012)*. All the analysts agree on two things: Mobile is becoming paramount in the advertising mix, and local will likely comprise more than two-thirds of all mobile advertising within five years. Simply put, local is how the medium is used.

On the high end of estimates, Borrell Associates expects local mobile display to grow from $2.2 billion in 2011 to more than $8.8 billion in 2016 (44% of $20 billion local display market). Meanwhile, local mobile search is expected to climb from $133 million in 2011 to more than $2.7 billion in 2016, or from 2% to 64% of all mobile search. Similarly, local mobile video is projected to vault from $58 million in 2011 to $2.9 billion in 2016, carrying over half of all local rich media.

Other estimates, while considerably more conservative in scale, support the pace of growth. For example, BIA/Kelsey's *U.S. Mobile Local Ad Revenue Forecast* projects overall mobile ad spending to grow from $690 million in 2011 to $4.86 billion in 2015, with local rising from $320 million to $3.37 billion (app. 65% of overall).

Mobile is fast becoming a primary local marketing channel.
All Estimates, Projections, and Forecasts in $ Millions

As of First Quarter of 2012 — Mobile Projections are Preliminary

Search

Year	Total Local	Local Mobile	Mobile Share
2011	$5,699.64	$133.89	2.3%
2012 (P)	$6,272.91	$960.42	15.3%
2016 (F)	$4,273.53	$2,741.79	64.2%
'11–'16 % Change	(25.0)	1947.8	

Display

Year	Total Local	Local Mobile	Mobile Share
2011	$2,208.37	$2,208.37	30.3%
2012 (P)	$3,654.66	$3,654.66	40.2%
2016 (F)	$8,809.31	$8,809.31	43.9%
'11–'16 % Change	298.9	298.9	

Video/Rich Media

Year	Total Local	Local Mobile	Mobile Share
2011	$2,456.37	$58.32	2.4%
2012 (P)	$3,513.66	$291.50	8.3%
2016 (F)	$5,565.82	$2,854.26	51.3%
'11–'16 % Change	126.6	4794.1	

SMS

Local Mobile
$840.51
$1,465.09
$2,313.90
175.3

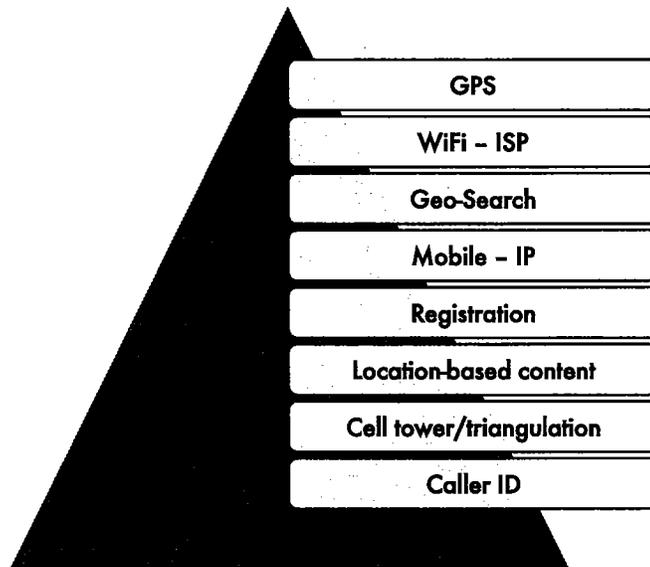*Borrell Associates counts SMS as an ad delivery mechanism vs. ad category (search, display and video)*

LOCATION-BASED TARGETING

It's important to match targeting levels to a business's real needs.

There are two general types of ad targeting for local mobile, and eight levels of targeting precision currently available.

The two general types are **geo-fence** and **geo-aware** targeting. Geo-fencing is relative to a place; it involves establishing a radius around a physical location (e.g., bar, restaurant, store) and serving ads to mobile consumers who are within that range. The range can be set from hundreds of feet (within stores) to several miles (suburban and rural locations). Geo-aware targeting is relative to a device; it's establishing a range around the device location and serving ads that recommend actions within the user's reach.

There are eight levels of precision, determined by how location data is processed. From most precise to most general, they are:

GPS

WiFi – ISP

Geo-Search

Mobile – IP

Registration

Location-based content

Cell tower/triangulation

Caller ID

It's important to know how these targeting levels are achieved—how the data is parsed—because the nature of the data flow determines what you can actually do. For example, precision does not guarantee scale or reliability.

GPS, or Lat/Long as it's called in the trade, relies on the device to pick up signals form the orbiting Global Positioning System satellite network. Users opt in to access location-specific content (e.g., maps and movie listings). GPS is the most accurate in places with clear lines of sight skyward. Because GPS is hampered indoors and among tall buildings, and users have to activate the feature, the applicable number of location-enabled phones varies. For this reason, GPS is typically supplemented with cell tower triangulation and Wi-Fi access point information.

WiFi – ISP estimates a user's location within the radius of a wireless network access point (e.g., in a home or store). The user's device has to be connected to the network. This geo-location method is accurate at the DMA level and, frequently, on a neighborhood level.

Geo-Search terms are relatively accurate determinants of a user's location because the person actually enters them (e.g., city, state, ZIP) in a search bar or map (e.g., weather or restaurant delivery). Geographic specificity is determined by the search terms. While a person can be in one place while searching for results in another, entering geo-search terms verifies a user's intention of retrieving information for that locale.

Carrier IP identifies a device by a numerical identifier (assigned by the carrier) that allows it to receive information across networks. Because it is integral to the device itself, it is one of the more consistent (though not most precise) forms of targeting.

Registration data assigns location according to a user's account address. Geographic specificity ranges from country to state level, depending on the type of registration data being collected. Like geo-search, registration cannot account for mobility.

Location-based content assumes proximity to a Web page containing local content (e.g., local newspaper). The nature of the content indicates the reader's local interest and intent, though not current location.

Cell tower/triangulation identifies all the devices operating within its range. It's accurate at the market level where there are multiple towers in proximity to users (e.g., dense urban areas). Because carriers control cell data, marketers can't really target on this basis. The data typically refines GPS information from the device.

Caller ID identifies the origin of a caller's phone by area code—either through call-capture or app registration—but cannot confirm the person's location. Mobile phone numbers are portable, so a 917 (New York) caller may actually be in, say, Mobile, AL. Caller ID comes into play principally with text advertising.

Targeting capabilities vary by site, publisher and ad network. Often, providers will combine multiple technologies to provide the precision at scale that individual campaigns require. A planner's foremost job is identifying the level of targeting a campaign needs, then choosing partners to deliver on that basis.

MEASUREMENT AND METRICS

While the baseline measurement on local mobile advertising in the industry today is CTR (click-through rate), the click is just the starting point to true return on investment.

A range of secondary actions put customers in direct contact with companies, brands, products and services. This contact happens offline. In particular, mobile users call to inquire, reserve, or purchase. They also check maps and driving directions to go to a location now. A high percentage complete a transaction within the hour.

Tracking secondary actions is currently a custom proposition. Existing online attribution models can't yet account for the complexity of the mobile infrastructure. As the science of attribution develops, marketers will be more able to isolate specific actions in the commerce chain.

All roads eventually lead to commerce. In local mobile, three fundamental things get measured: acquisition, behavior, and conversion. The fundamental measures of acquisition are how many people, and how many different people, visit your website from a mobile device. For behavior, it's how much time they spend on the site, how many pages they view and how quickly they turn away (otherwise known as the bounce rate). On conversion, it's how many people register, request information, or order (average order and dollars/order).

For click-to-call campaigns, four things should be measured: volume of calls, duration of calls, real vs. mistake (e.g., misdials, solicitors) calls, and percent of calls from potential vs. existing customers (which determines actual cost per call).

PLANNING

Mobile is not an either-or proposition relative to other local media.

The most important thing a planner can do is ground mobile in a complete media effort aimed at getting people to know, think and do precise things. That starts with mapping out the entire mobile user experience relative to a brand, product or service. In other words, how will people use the information your ad provides?

Success is determined ultimately by the context of engagement—what you're trying to accomplish. The first question to answer is why. Why local? What do we want to accomplish? Do we need action and traffic? Are we trying to reach younger people on what's emerging as a medium of choice? Are we trying to understand a new communications platform?

If the goal is learning a new medium or user base, you can prioritize precision over reach. If the goal is return on investment—action, traffic and conversion—it's essential to balance targeting with what's repeatable at scale.

Treat mobile as a channel, not a silo. Particularly with check-in campaigns and other limited-time promotions, it's important to incorporate multiple media channels to get the word out. You need reach to spur the involvement. Advertising on these other media might call for the user to send a text message to a short code, thereby opting in to a pull campaign or allowing their phone number to be added to a database for a push campaign. Think American Idol, where viewers cast more votes for contestants (64.5 million last year) than have ever backed a U.S. president.

Plan for the chain reaction. It's important to develop the chain reaction that local mobile can ignite. That means several things. First, develop a mobile-optimized landing page, so users get complete information that loads and fits on the small screen. Second, make sure the product is available. Third, make sure employees and other constituents know what the brand is doing; so when customers check in at a retail location and/or ask questions, they get answers and assistance rather than "Huh?" Fourth, alert any retailers involved to the specifics of promotions, contests and offers that put them on consumers' screens—so you complete the deal or cycle, and you avoid annoying prospective customers. Better yet, involve them in the promotions, by collaborating with them.

Set appropriate scale. From a planning perspective, it's important to balance reach, precision and frequency. The more precisely you geo-target a mobile campaign, the less reach you're getting. So the scale has to fit the scale of the brand and campaign. Most national campaigns can get by with local mobile targeting at the DMA level, whereas local institutions (e.g., bars, restaurants, stores) and promotions involving them (e.g., liquor promotions at specific bars) can target neighborhoods efficiently.

As a rule of thumb, the more people you need to click, visit, inquire or buy, the broader you need to target. If you need people to walk to a big-city restaurant for dinner tonight, then a neighborhood campaign is realistic. If you need to sell diet soda this weekend at a rural closeout store, then a 20-mile radius is appropriate.

Create action...and measure it. The more meaningful actions you prompt people to take beyond the click, the deeper they engage, and the easier you can track campaign impact. Ask people to do something specific. For example, go to the nearest bar location tonight and check in on Foursquare to get a free drink sample, or vote for your favorite neighborhood restaurant today to get a redeemable coupon. The reward cycle wins fans while telling you a great deal about what people will respond to.

iab.

Click to connect. The easiest response to any mobile phone ad is a call; it's a phone, after all, and you can talk on the go better than you can type on the go. More than half of the calls generated by local search ads come from mobile phones; and a phone number can increase click-through by as much as 8%. Add a click-to-call feature and make it prominent if you're marketing a service that's complex or requires reservations. Offer something free or substantially discounted, track calls from ads, and support callers with trained professionals.

The next easiest response is to click on a map. For any type of retail location, consider incorporating a store locator with one-click access to street maps and driving directions.

Click to text. Allowing consumers to text customer service adds a level of engagement and creates an opportunity to show responsiveness. A "Text Us" button, prominently displayed under customer service, is enough to prompt the connection.

Take the mobile web in-store. Particularly for big brands with the user bases and capital to justify and maintain them, apps and optimized sites that speed information and shopping are an option. They can bestow utility on a brand in ways that traditional advertising can't. For example, some retail apps reward shoppers with coupons when they check in on Foursquare; others even connect shoppers with sales associates in store.

Automate campaign management. Particularly for smaller advertisers that know what needs to be done but can't meet the minimums publishers require, self-service systems to automate campaign management can make sense. For example, there are rich media templates that permit advertisers to create ads by dragging and dropping assets from their own libraries. And there are media logistics companies that can take over campaign execution, from contract management to optimization and payment. By contrast, it's important to deal directly with salespeople when there are special components—custom content, sponsorship, or special metrics—involved in the campaign.

Push for projection and proof. Small, local businesses, in particular, need to push websites, directories and search engines to set expectations. Providers should be able to tell prospective advertisers what to expect from mobile investment, in addition to validating what actually happened.

DESIGN

Successful mobile design mimics the way people use their mobile devices in particular moments. The key is speed of search, discovery and transaction.

Rule number one: Optimize. Design ads and other content for mobile to work within the screen, and always establish mobile-friendly landing pages for any links. Sending mobile consumers to the regular website is the #1 mistake in mobile. Full website pages require too much manipulation (the user has to expand the page, then scroll across as well as up and down to read it).

If a mobile site doesn't meet the needs for information easily at speed, 61% of consumers won't come back. What's more, 40% will click straight to a competitor's site, and 20% will take away a bad taste for the business *(Compuware, Why The Mobile Web is Disappointing End Users, March 2011)*.

Keep it brief. Headlines consumers can read in two seconds, and obvious calls to action, are paramount.

Make your contact information prominent. Links to phone, email and address with map (map is essential) need to be unmistakable.

Design for particular platforms. Rich media features differ by device, operating system and platform (e.g., apps). Larger advertisers will need to create separate versions of mobile apps for Google's Android and Apple's iOS operating systems—hardware platforms with the largest installed bases (depending on campaign or audience, Microsoft's Windows Phone and RIM's Blackberry platforms will also matter)—while smaller advertisers may need to start with just one. For mobile web it is easier to design experiences that work across platforms—as long as designers stick to mobile web standards and avoid Flash —though substantial testing is required to ensure a consistent experience.

Thumb-proof the landing page. Put some white space between the buttons and links, so users can hit the right ones without having to zoom in. Preserve the brand imagery but scale it down for the handheld screen.

PRIVACY

Location privacy is an escalating issue for legislators. It's incumbent on advertisers to understand the rules that affect what you can do, and how you can do it, in mobile.

Privacy legislation centers on three things:

1) Who has access to location data and how it is used.

2) The extent to which consumers are aware of location tracking.

3) The degree of control that consumers can exercise over location tracking.

The sticking point is identifying, using and monitoring location without a consumer's expressed consent. Legislators fear for both privacy and safety, often citing the potential for stalking and child endangerment. The pressure intensifies as more passive connection technologies (e.g., ambient social networking apps, which transmit location, data and personal information between devices in a geographic area) come into play.

Currently, location opt-ins are device or platform specific. Apps that pivot off location will ask, via pop-ups, for approval to "use current location." Typically, geo-fencing ads will reach any phones that are location-enabled and in range. While most carriers now ship devices with location disabled, and consumers can disable the location function at will, legislators argue that most mobile users have no idea they can be geo-located, and that there are other methods of pegging a device's location.

The Digital Advertising Alliance (DAA) is in the process of developing mobile self-regulatory principles to address consumer notice and control over collection and use of location data. An industry approved mechanism for providing the consumer with notice and the ability to consent to location collection and use will be incorporated into the DAA program in the future.

For advertisers, the golden rule is *let them know.* Giving people the opportunity to choose—opt in or opt out of location tracking—satisfies the responsibility to honor privacy. This consideration needs to be built into every stage in the consumer communication chain.

EXAMPLES/CASE STUDIES

How does local mobile actually work for an advertiser? Here are a few examples of how large national brands and small local businesses alike have used the medium successfully.

Behold a RadioShack

Goal: RadioShack sought to raise brand awareness among Hispanics, get more people to renew mobile contracts in its stores, and reinforce its market leadership in mobile phone and accessories (40% of chain revenues) sales.
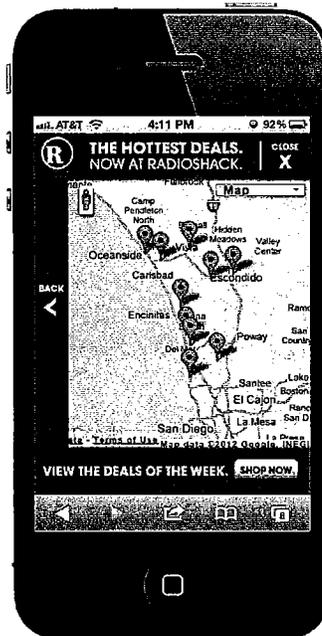
Execution: Created by MindShare Chicago and produced by Verve Wireless, the campaign employed six technologies—GPS, WiFi-ISP, registration, carrier IP, cell tower triangulation and location-based content—to deliver ads to devices registered at least 18 months before when the owner was within five miles of a RadioShack.

Creative: The run-of-network campaign integrated mobile circulars and location-aware dynamic ads. The banners clearly stated proximity to the nearest RadioShack. When clicked, each ad offered a map pinpointing the store location and a connection to the deals of the week.

Result: Fully 89% of campaign impressions were generated within the five-mile radius of RadioShack locations (the remainder in the five- to 10-mile range). CTR doubled the industry standard. On average, people engaged with the ad for a full 26 seconds. Recall and favorability rates rose significantly, as did relevance (agreeing that RadioShack products and services meet my needs).

Radioshack - Dynamic Banner   Radioshack - Map (Resolve)

Welcome to Luxury Dentistry

Goal: Mint Dentistry, a luxury dentistry practice in Dallas, TX, wanted to bring in new clients, specifically affluent customers.

Execution: Mint Dentistry worked directly with Pandora to run a three-month promotion via Pandora, the customizable online music channel based on Pandora's registration data. They decided to run a campaign targeted to adults 25-54 covering zip codes within a 10 mile area of the Mint Dentistry office on Pandora's mobile app in order to reach the customers Mint Dentistry was looking for.

Creative: The creative consisted of an audio ad unit that simply stated the promotion, office location and phone number. Clicks on the banners led to www.mintdentistry.com, which is a mobile optimized experience.

Result: Pandora served more than 2 million targeted ads, delivering a CTR of 1.38%. Mint's new patient volume increased 300%. The Dentist, Dr. Field Harrison, was blown away by the results. Lacking the elaborate tracking mechanisms of major brands, Dr. Harrison simply compared new patient volume month to month, and asked new patients, "How did you hear about us?"

Free Fryday

Goal: Burger King needed to bring people into its U.S. locations to try a new French fry.

Execution: Mobile provided the promotional lever in a media mix including social media, digital and TV. Mobile ads before and during the event directed people within five miles of a Burger King to stop in and try it the new fry free on Friday. Starcom ran the ads across the Verve Wireless network of 3,500+ premium national and local mobile media sites. Ads dynamically updated restaurant listings based on location, determined by GPS, Wi-Fi, ZIP code, and carrier IP, and scored for accuracy via proprietary Verve mobile technology.

Creative: Custom tap-to-calendar and tap-to-map rich media units incorporated a countdown clock to "Free Fries Friday" (12/16/2011) at the local Burger King. Every execution listed the hashtag #BKFREEFRYDAY to prompt sharing.

Result: According to a post-promotion Beacon study, "Free Fries Friday" was cited in 40% of online conversation about Burger King during the promotional period. The chain registered a 37% increase in restaurant traffic on "Free Fries Friday" — the highest lift it experienced in 2011. As a result, Burger King commissioned a full schedule of location-aware, dynamic mobile campaigns in 2012.
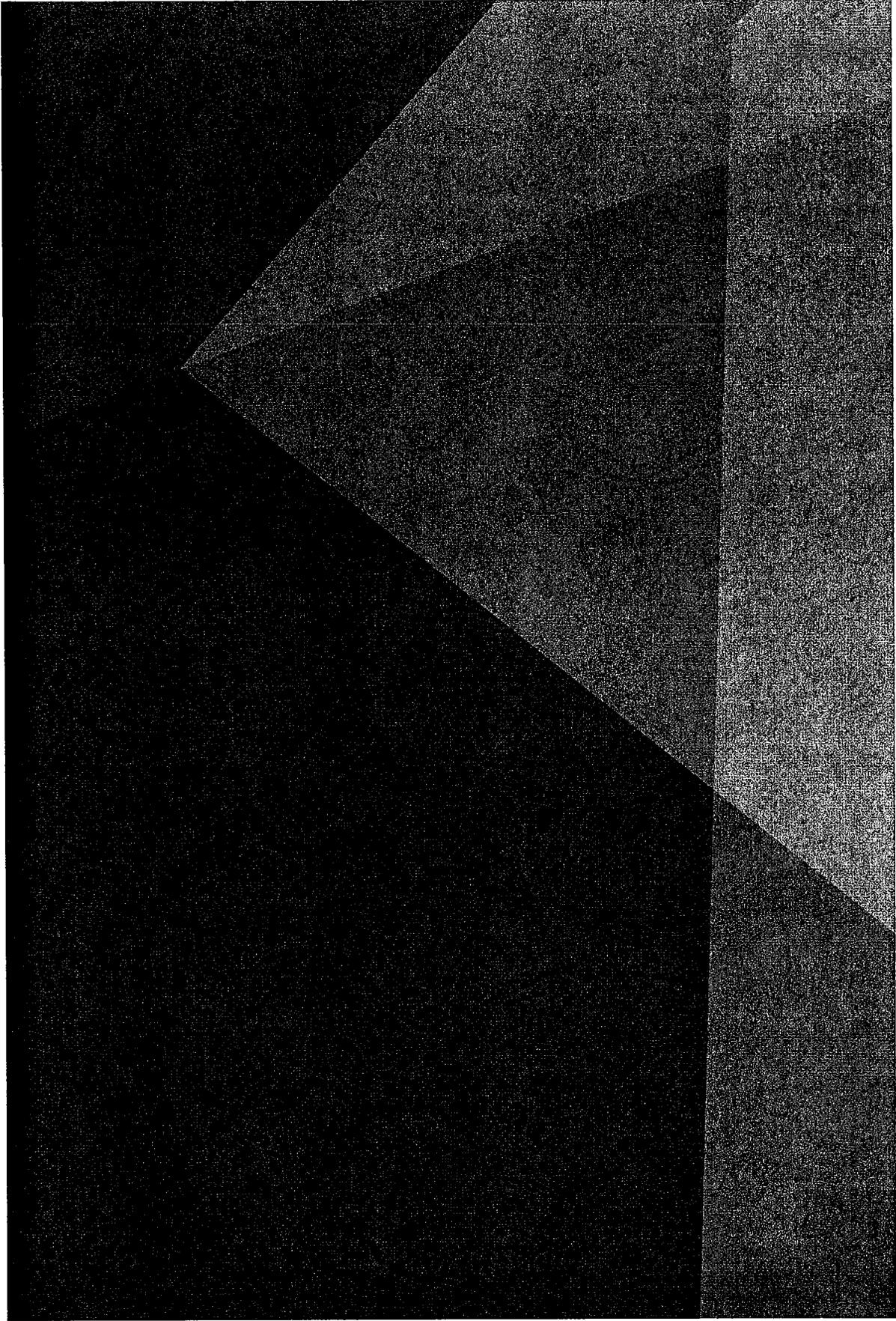
The Private Exchange

A White Paper

Admeld

We're passionate about helping publishers win.

Contents

Foreword

The digital technology space is as rife with hyperbole as any other, perhaps with the notable exception of politics. Still it's hard to dismiss what's happened in display advertising over the past few years as anything short of remarkable. Real Time Bidding (RTB), data management, private exchanges—none of these innovations is a panacea—but when taken together they represent a universe of new opportunity for both publishers and buyers.

If the first phase in the adoption of any new technology is simply to turn it on, the second phase is about experimentation to gain a deeper understanding of how to use it. That's where we are now, and nowhere is this more apparent than in the realm of the private exchange. For the first time, many premium publishers are looking to these platforms to help them create new efficiencies and revenue streams. In my view, it's every bit as much an innovation in their thinking as it is a technical one.

It's been said before, but it's still early days in display advertising, and we're all working to grasp the implications of all this change. We hope this book will help you gain a better understanding of what private exchanges are and how you can use them to grow your business.

Regards,

Michael Barrett

Michael Barrett
CEO, ADMELD

The Coevolution of Media

Jason Kelly, CHIEF MEDIA OFFICER, ADMELD

While working at Microsoft Advertising and Time Inc., it became clear to me that display advertising was beginning to follow a back-and-forth pattern in which buyers and sellers influenced each other in alternating spurts of innovation. In 2009, I witnessed the increased use of technology by buyers push publishers to do the same, or risk losing their fair share of spend.

In 2011, publishers moved forward again with innovations such as intelligent price floors, data protection/management, and private exchanges. As it pertains to the latter, NBCUniversal, The Weather Channel, quadrantONE, CBSi, and others have embraced the private exchange model because it represents a more holistic, customized, and technically savvy vision for their display business. In response, many buyers are changing their own strategies and approaches, and the cycle is repeating again.

From many a late night watching Discovery, I know that biologists call this a "coevolutionary" dynamic, and in the wild it often leads to an arms race between species in which they leapfrog each other in perpetuity. More than ever, buyers and sellers have the opportunity to avoid the arms race, evolve together, and adopt a more unified approach to serving their mutual client: the advertiser.

In order to help frame a conversation around private exchanges, in the following pages we've compiled a series of viewpoints from various industry executives. Their general consensus is that private exchanges lay the foundation for helping premium publishers and buyers meet their shared goals, a sentiment was best summarized by Arthur Muldoon of Accordant Media, who said *"Private exchanges cultivate testing, learning and scaling of biddable media commitments for both the buy-side and sell-side in a transparent, collaborative environment."*

Other executives commented that the pendulum in the industry has swung too far towards audience buying and that private exchanges are helping to revive context as an important factor in the value of media. And almost everyone we spoke with on the buy side stressed the lack of high quality inventory available in the marketplace. Said Adam Cahill of Hill Holliday: *"The only way to improve [the availability of quality of inventory] is to find ways for premium publishers to make money and maintain more control over their inventory. It seems like private exchanges do that."*

Ultimately, we have to temper our optimism with the reality that things aren't always perfect in private exchange land. Despite conceptual buy-in from many across the industry, there are still barriers that need to be addressed before private exchanges can fully deliver on their potential. Off the record, many publishers we spoke with complained about the lack of demand across the industry. Though spending will surely ramp up in Q4, part of the problem, the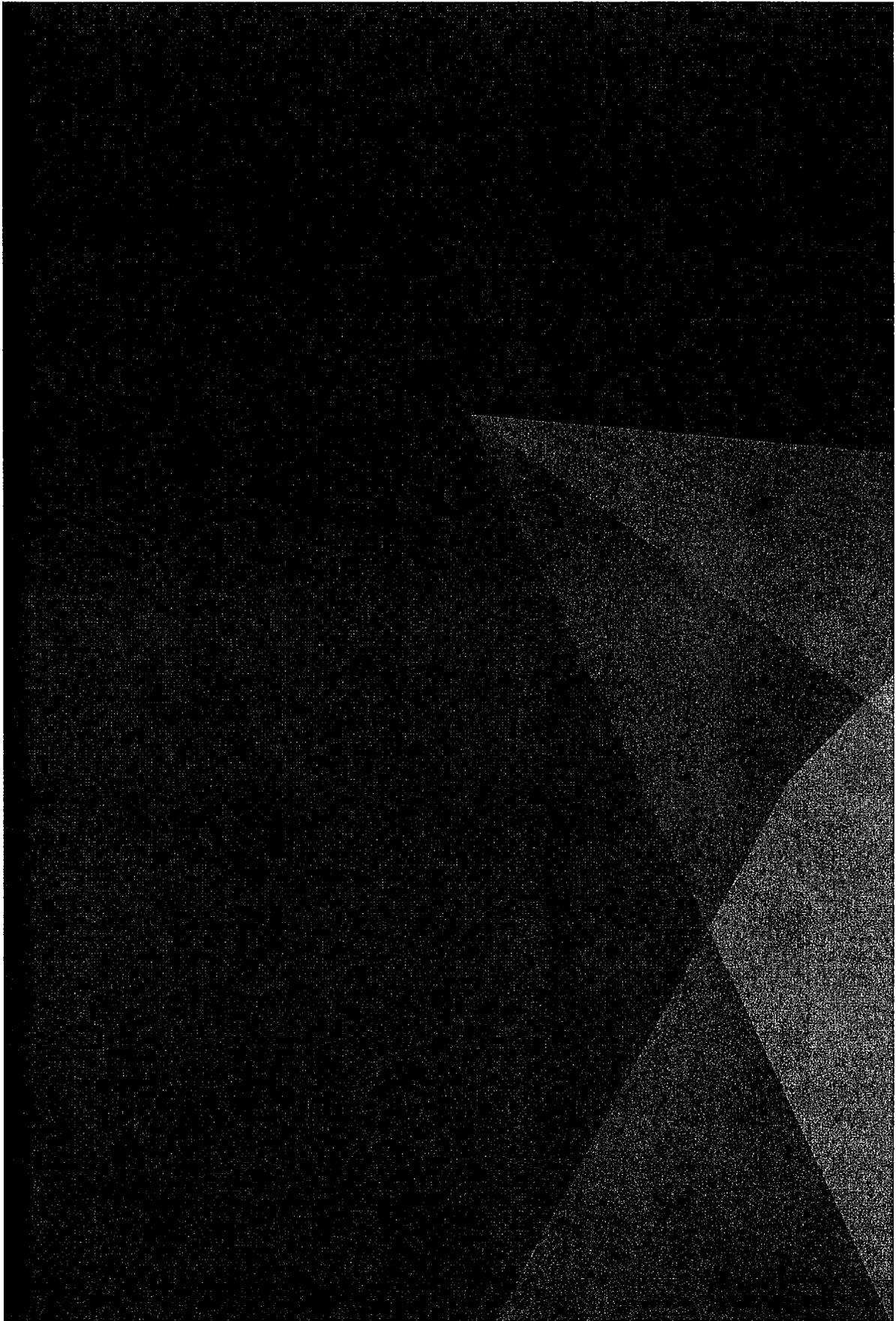y say, is attributable to the fact that some DSPs and trading desks are struggling to find the most efficient ways to collaborate given a web of overlapping clients and priorities. This is a natural result of the changes that have taken place in the market, and it will lessen over time.

> **"**
> Ultimately, we have to temper our optimism with the reality that things aren't always perfect in private exchange land. "

Another challenge is that brand budgets have significantly trailed expectations. One of the ways Admeld is helping our clients capture these types of brand dollars is through a component of our private exchange offering called "prioritized bidding," sometimes known as "reserve/guaranteed RTB" or "private ad slots." Prioritized bidding enables publishers to grant preferred access to specific buyers under specific circumstances, giving both buyers and sellers confidence their mutual goals are being met.

At Admeld's last partner forum in February 2011, our theme was 'people, powered by technology,' and we remain committed to that view. The technical infrastructure for efficiently and transparently transacting media is finally coming into place across the ecosystem—now it's up to people on all sides to stop leapfrogging and to start evolving together.

Industry
Viewpoints

" The Private Exchange model may be looked back upon as the keystone to the growth and sustainability of ad exchanges overall. Private exchanges cultivate testing, learning and scaling of biddable media commitments for both the buy-side and sell-side in a transparent, collaborative environment. As Accordant Media seeks more targeted, engaging ad inventory for our clients, our sell-side private exchange partners are finding ways to monetize placements in more controlled, premium ways. This win-win mentality helps us all to grow the biddable media industry."

Arthur F. Muldoon
CO-FOUNDER & CEO, ACCORDANT MEDIA

Anthony Rhind
CO-CEO, GLOBAL, HAVAS DIGITAL

"The programmatic buying evolution promises great improvements in terms of inventory efficiencies & targeting effectiveness. However the early market emphasis has been too heavily biased to audience buying, with context incorporated as a behavioural profile or intent data point rather than as an ad placement criteria measured for conversion contribution; this has prompted many 'premium' publishers seeking to maximise yield on the basis of content & environment not to enable transparent programmatic trading of their inventory. The private exchanges are an important first step to build the publisher's confidence that real-time impression markets can drive monetisation upwards, with transparent programmatic buying facilitating price discrimination where inventory is scarce & environment is in-demand, which typically is the case with higher-yield 'premium publishers'. This is a virtuous-cycle benefiting both publishers & advertisers, buyers are able to win desired impressions, with both audience certainty & contextual relevance, balancing the higher publisher yield with reduced wastage & improved conversion."

Darren Herman
CHIEF DIGITAL MEDIA OFFICER, THE MEDIA KITCHEN

"I'm excited with the current and future prospects of private exchanges. We have found that by partnering with our MDC Partners Trading Desk, Varick Media Management, we have been able to come to the table with a real value proposition to publishers and form unique relationships. The partnership of Agency + Trading Desk allows us to move the needle in Tier 1 inventory and give us access to publisher inventory we'd not normally see. The current model of private exchanges will evolve over time and we'll watch it closely and continue to participate as it matures."

David L. Smith

CEO, MEDIASMITH, INC.

"Mediasmith looks to participate more in private exchanges in the coming year. We feel that this is an excellent way to reduce friction and pain points of doing business with sites we already prefer in addition to making it easier to try new relationships."

Bill Wise

CEO, MEDIABANK

"The current digital landscape is too much of a barbell, with a focus on the extremes in the market... One side of the barbell is the premium futures market largely driven by context, while the other is the spot market largely driven by performance and open exchanges. Private exchanges are a necessary middleware to increase yield and market dynamics. However, the absolute key is creating a new composition of demand."

Matt Greitzer

CO-FOUNDER & COO, ACCORDANT MEDIA

"We've learned, or rather re-learned, over the past few years that content matters. So we are excited about private exchanges, and any tools and capabilities that encourage high quality publishers to participate in the biddable media ecosystem."

Drew Schutte

SVP AND CHIEF REVENUE OFFICER, CONDÉ NAST

"Condé Nast is enthusiastic about the opportunity the private exchange provides. As a company that never used ad networks, we are thrilled with the control and flexibility the exchange provides."

" I think the most important issue
when it comes to exchange–
traded media is quality. Right now
there isn't enough high–quality
inventory available. The only way
to improve that is to find ways for
premium publishers to be able to
make money and maintain more
control over their inventory. It
seems like private exchanges do
that, and we're all for anything
that brings better inventory into
exchanges. "

Adam Cahill
EVP, CO–MEDIA DIRECTOR,
HILL HOLLIDAY

" The concept of the private media exchange makes a ton of sense. At BlueKai we see a parallel in the data world – where data creators need the flexibility to use their own data exclusively, sell their data publicly in the exchange, or sell their data privately on their own. We can see why the same dynamic would be driving the media domain and we can see why Admeld would lead that movement."

Omar Tawakol
CEO, BLUEKAI

Mike Kelly

CEO, THE WEATHER CHANNEL

"How digital advertising gets bought and sold is changing quickly. The most valuable display inventory is created by the first party premium sites like Weather.com. Advertisers, seeking scale and price efficiency have been using technology to assemble large audiences, first through ad networks and now with their own proprietary technology. In addition, exchanges provide an opportunity to use data and technology to extract value. As a top 15 site and the largest mobile content site, The Weather Channel has enormous audiences and valuable data. To be competitive, we need to understand and play in all parts of the business as it evolves. Real time bidding, data driven audience buying etc can be opportunities to bring more demand to your inventory. Our sales organization is extremely effective at bringing that value to advertisers but they don't sell all of our inventory. Previously a publisher's only choices were to either not monetize that inventory or sell it through networks or open exchanges. By creating a Private exchange we can go to market in a tiered approach, getting better yield from our inventory while protecting our data and users and staying competitive in this rapidly-changing environment."

Sam Bloom

GM INTERACTIVE, CAMELOT COMMUNICATIONS, LTD.

"Private exchanges enable our clients to work more strategically with premium publishers. We think it's a win/win for both clients and the publishers."

Laura Behling
DIRECTOR, ONLINE MEDIA DEVELOPMENT, DOTOMI

"We are actively engaged across many of the exchanges utilizing the Private Auction model. Because we are willing to pay more for premium inventory, it has been an effective way to acquire quality, brand safe inventory for our advertisers. This method also allows us to own the relationship with the publishers we are buying from.

There are nuances that the publishers control so the buyer needs to understand exactly what they are getting in a private auction. Is the negotiated price a floor price or a fixed price? Is there a budget commitment involved? Are you guaranteed "first look" or early session impressions? It's important that the buyer know how the publisher allocates its inventory and understands all of the details of the deal before committing to a buy.

I see this as a positive for both the advertiser and publisher as it is a mechanism for publishers to select only the advertisers it wants, avoiding conflict with their direct sales channel and it opens up quality brand safe inventory for advertisers."
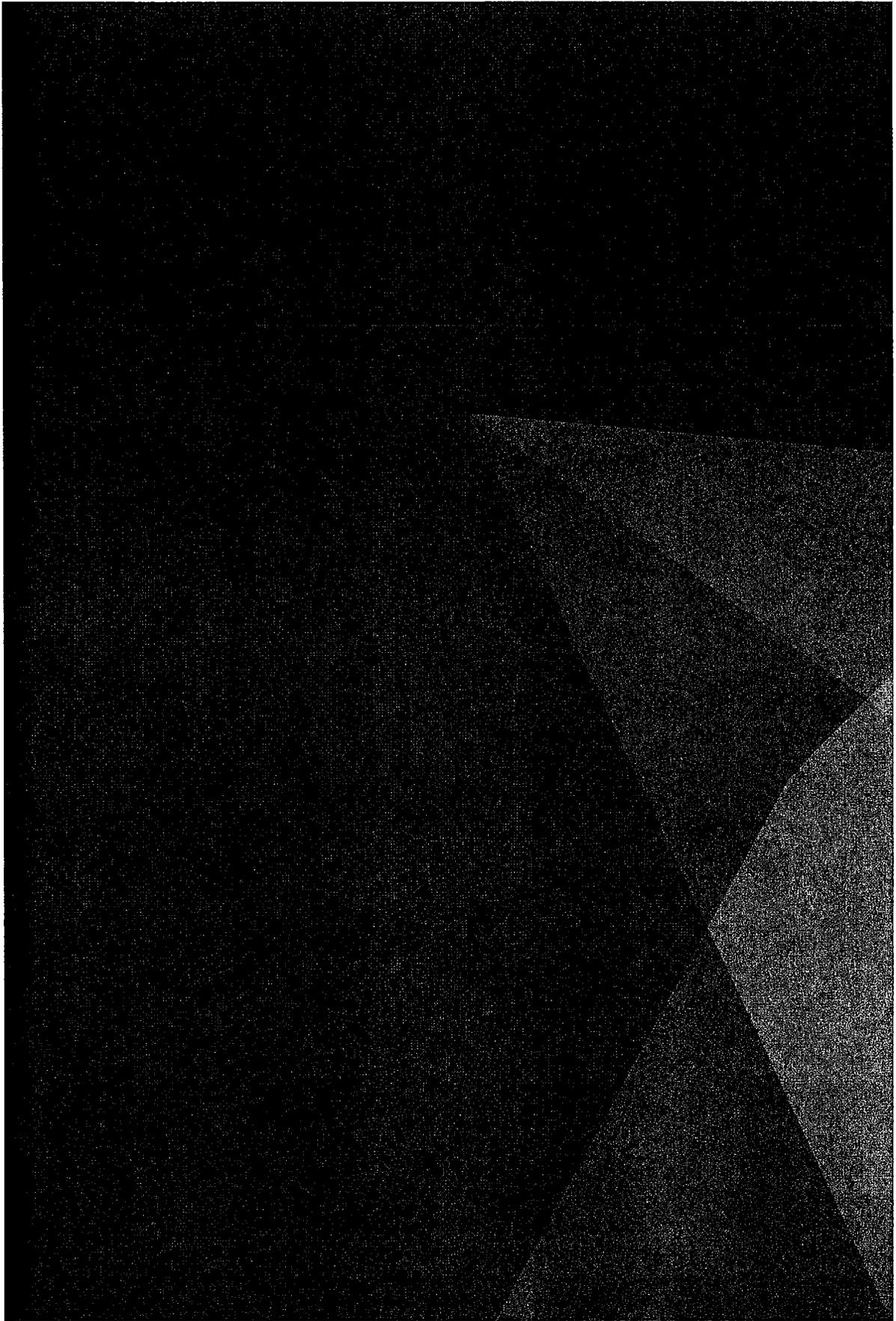
Bill Murray
VICE PRESIDENT OF ADVERTISING OPERATIONS, THE WEATHER CHANNEL

"Category 5, the Private Exchange we have built with Admeld has provided us a cost effective way to more strategically manage unsold inventory. The rules-based nature of the platform not only allows for exclusive access, pricing and simplified management of multiple vendors, it also provides tremendous insights into the value of inventory. As a result, we know who to work with, what they are interested in buying, and can price accordingly. With the continued shift to audience buying, this is an essential tool for us. That said, this is not an "If you build it, they will come" scenario. Advertisers and networks must still be engaged to educate them on the characteristics and value your property. Increasing demand for your inventory is essential to realizing success."

The
Admeld
Private
Exchange
Solution

Admeld's Private Exchange Solution

Designed for the World's Top Publishers

NBCUniversal
Digital Media

CBS Interactive

quadrant**ONE**
Local Audience Insights. Premium, National Reach.

The
Weather
Channel ®

In November 2010, Admeld launched the industry's first
private ad exchange—a highly customized, invite–only
marketplace designed for the very largest publishers – those
with audiences over 30 million uniques and the brand equity
to attract buyers on their own.

Direct Connections to Every Major Demand Source

Admeld connects you directly to every Demand Side Platform (DSP),
trading desk and ad network. It's your choice who you allow to transact.

Maximum Revenue

Founded in 2007 for ad network optimization, Admeld is the recognized
leader in yield optimization for premium publishers. This is manifested
in several cutting–edge private exchange features.

Intelligent Floors
Admeld's dynamic price floor technology determines the maximum
price based on market value, specific business rules, and historical
bidding patterns.

Prioritized Bidding
Creates an upfront bidding environment, empowering you to set
rules within the exchange and giving preference to buyers (DSPs or
Agency Trading Desks) based on pre–negotiated terms.

Brand & Channel Conflict Protections

Admeld's technology gives you complete control over who can access your inventory and at what rates for private exchange clients, the controls are even more robust:

Advertiser-Level Block Lists
Granular settings to specify which advertisers, agencies, and DSPs can access your inventory.

Advanced Data Protection, Malware & Pixel Scanning

Firemeld
Firemeld was the industry's first in-browser reporting tool for sales and ad operations professionals. It enables you to monitor and control every ad running across your properties.
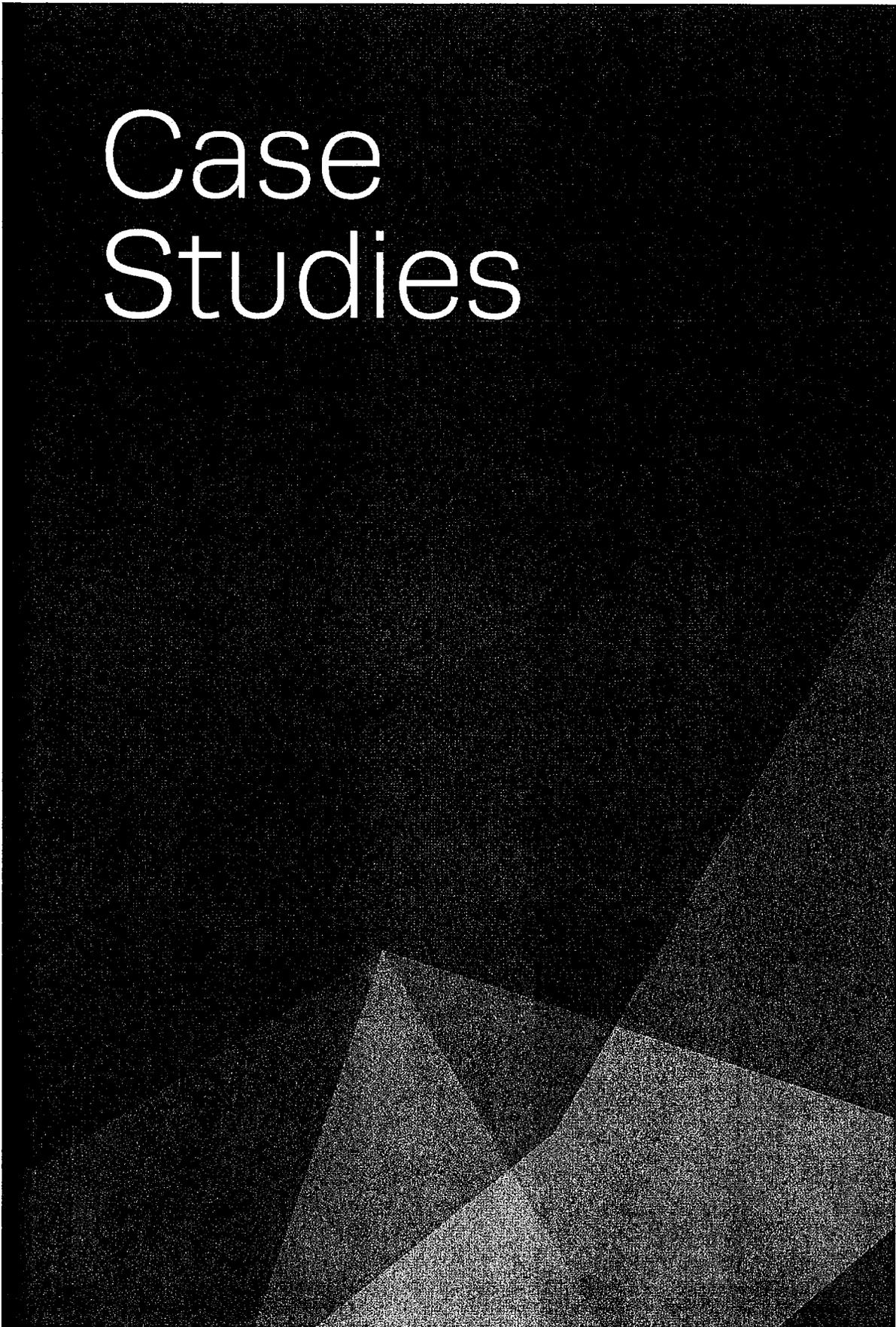
Deep Audience Insights

Admeld's data analytics enable you to correlate and analyze pricing data with your own data segments or those from top 3rd parties. This enables you to identify, package, and sell your most valuable users across your exchange.

Strategic Advisory Services

Admeld's Strategic Advisory Services group provides our private exchange clients with expert guidance and support ranging from project-managing, complex technical implementations, to helping secure demand from major buyers.

Case
Studies

quadrant**ONE**
Local Audience Insights. Premium, National Reach.

For quadrantONE, a joint venture by Tribune Company, Gannett Co. Inc, Hearst Corporation, and the New York Times Corporation, Admeld created "Q-Exchange." The technology enables quadrantONE to manage their unsold ad inventory, and give buyers the ability to target specific audiences and markets across the publisher's properties.

Client Objectives

In early 2011, quadrantONE entered discussions with Admeld around the concept of creating an exchange of their own to manage how inventory for The New York Times Co., Hearst, Tribune and Gannett was sold. They no longer wished to offer their inventory through other networks, as they weren't providing the best dollar return, nor did they provide the control the brands required.

Admeld's Solution

Admeld developed a custom private ad exchange offering for all four media companies, focusing on their premium and regional inventory. "Q-Exchange" allows the four partners to safely and transparently monetize their unsold inventory via RTB in Admeld's marketplace, while maintaining control over each impression. "Q-Exchange" gives quadrantONE complete control over sales of their unsold inventory, reduces channel conflict, and aggregates inventory for the benefit of the buy side. To date, quadrantONE has found that inventory sold via RTB is out-performing traditional yield optimization. quadrantONE estimates that "Q-Exchange" will handle the sale of around 2 billion impressions a month moving forward.

" We chose Admeld to power Q-Exchange because their private exchange technology provides maximum control, transparency, and versatility."

– Mario Diez CEO of quadrantONE
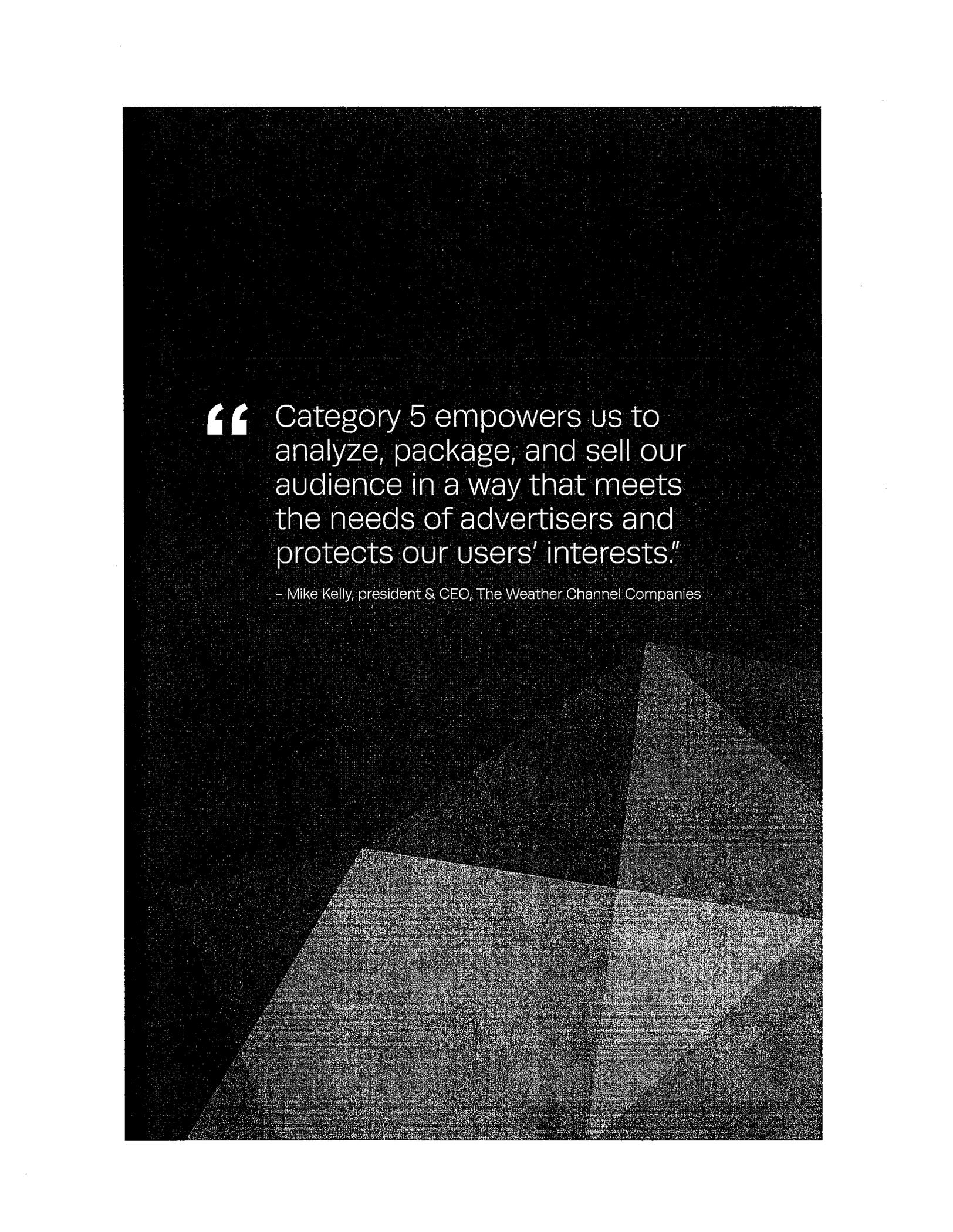
The Weather Channel

Admeld created "Category 5" for The Weather Channel (TWC), the first major global brand to launch a private exchange. With Category 5, programmatic buyers gain direct access to all 50 million + TWC's mobile and online users while giving the publisher complete control over how each impression is sold.

Client Objectives

TWC sought to increase the overall value of both its display and mobile inventory and to manage relationships with advertisers more directly rather than work through third-party ad networks. The company wanted to more efficiently manage the way their uncommitted inventory was sold while exerting more control over pricing and other criteria.

Admeld's Solution

Admeld addressed TWC's needs by developing a private exchange to exclusively manage the company's online and mobile inventory. "Category 5" connects TWC to every major programmatic buyer and has an audience sales module that enables the publisher to identify, package, and monetize their most valuable users. Additionally, Category 5 provides analytics and controls necessary to help TWC stay aware of buying and pricing trends. With Category 5, TWC now connects advertisers (including buyers from the largest media holding companies such as Omnicom and Vivaki) directly to their consumers.

"Category 5 empowers us to analyze, package, and sell our audience in a way that meets the needs of advertisers and protects our users' interests."

– Mike Kelly, president & CEO, The Weather Channel Companies

NBCUniversal
Digital Media

In July 2011 NBC's Universal Audience Platform, the company's internal ad network, added a private exchange, powered by Admeld, creating a new programmatic sales channel for buyers to access various premium audiences, including most of NBCU's owned-and-operated digital properties.

Client Objectives

NBCU's goal was to further evolve the relationships with their agency partners and dial back their use of ad networks that had been selling against their media brands. They needed to monetize their indirect inventory in a controlled, biddable environment and were looking to remove any uncertainty around the identity of the buyer.

Admeld's Solution

With the creation of UAP's private exchange, NBCU can now verify their most valuable audience segments, grant access to a select group of buyers, and set granular rules around pricing their inventory. The company is now efficiently monetizing their inventory within their own private marketplace.

" One of our main goals in launching the UAP was to take better control over our uncommitted digital ad inventory and dial back our reliance on third party ad networks... By launching this private exchange, we can work directly with our agency and media partners, offering them better pricing, more informed and targeted advertising buys, and the opportunity to deal directly with trusted and premium content sources."

– Peter Naylor, EVP, Digital Media Sales, NBC Universal Digital

◉ **CBS** Interactive

CBS launched an Admeld-powered private exchange to offer a select group of buyers access to their premium inventory, and gain from the controls and efficiencies that the Admeld platform offers. Within this exclusive environment, CBS now sells directly to select trading desks and agencies.

Client Objectives

CBS Interactive approached Admeld with the objective of creating an invite-only, RTB buying environment. They were interested in establishing a presence in the exchange channel to serve the evolving needs of their clients, while securely protecting CBS Interactive's brands & data and providing a new solution for CBS Interactive's salesforce to take to market.
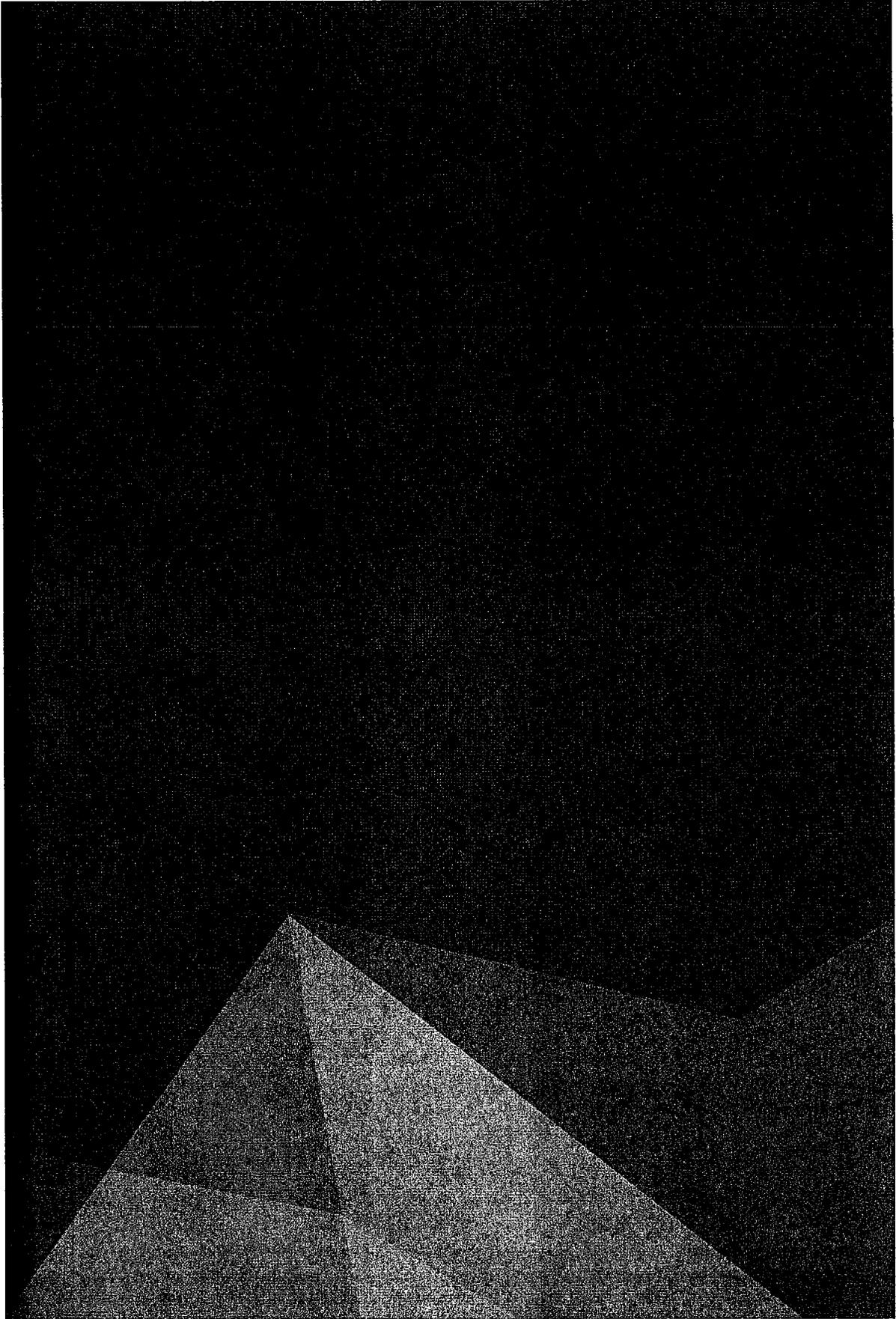
Admeld's Solution

The CBS Interactive private exchange has effectively provided buyers the ability to reach CBSI's high-quality audiences and has allowed the company to provide marketers direct solutions for programs typically bought from Ad Networks & Exchanges.

" The opportunity to bring together data, biddable transactions, the internet's greatest brands and buyers who pay fair market value for these audiences is a great evolution for the exchange category of this industry. Admeld is providing CBS Interactive with technology that allows us to partner with our clients in new ways, giving them the safety of premium brand environments, while delivering the transparency and control we require. The Admeld team has played a key role in our efforts to evolve the way exchange partnerships are structured and opened the channel as an opportunity for premium publishers."

– Zack Rogers, SVP Sales Strategy & Operations, CBS Interactive

Our
Executive
Team

Admeld Leadership

Michael Barrett
CEO

Michael joined Admeld from Fox Interactive Media, where he was Executive Vice President, Chief Revenue Officer and oversaw worldwide revenue for all properties, including MySpace, IGN, FoxSports.com, Fox.com, AmericanIdol.com and Scout.com. Before Fox, Michael held senior sales positions at interactive leaders AOL Media Networks, GeoCities/Yahoo! and Disney Online. Prior to joining Disney, he held senior positions with Meredith Publishing, Newsweek Magazine and Family PC Magazine.

Benjamin Barokas
CO-FOUNDER & CHIEF REVENUE OFFICER

Ben oversees the company's worldwide sales and operations efforts. Prior to founding Admeld, Ben was Vice President of Advertising for JumpTV. He also spent 6 years at AOL in a variety of online advertising leadership positions including senior manager on the team that developed and launched the AOL video platform. Ben serves on the IAB's Networks and Exchanges Committee and is a regular industry speaker on monetization strategies for premium online publishers, yield optimization, data, and Real Time Bidding (RTB).

Brian Adams
CO-FOUNDER & CTO

Prior to founding Admeld, Brian was Vice President of Engineering at JumpTV. Prior to JumpTV, Brian had been with AOL where he led the development of the AOL Video advertising infrastructure. Prior to AOL, Brian was a founder of MyBookmarks.com, which was sold to Backflip Inc. in 2000 and was a senior engineer at Angelfire.com.

Jason Kelly
CHIEF MEDIA OFFICER

As Admeld's Chief Media Officer, Jason oversees the company's global relationships with demand and data partners, and spearheads strategic projects serving the Web's largest and most prominent publishers. Jason joined Admeld from Time Inc., where he was Vice President of Strategy & Revenue Management. Prior to Time Inc., Jason was at Rapt, a part of Advertising and Publisher Solutions at Microsoft. Before that, he spent more than a decade in the airline industry, most recently as the director of revenue management, sales and online distribution for Virgin America.

Contact Information

Admeld's mission is to keep premium publishers on the cutting edge of advertising technology, enabling them to maximize revenues and sell their inventory smarter and safer. Founded in 2007, the company has more than 500 clients worldwide.

New York

One Madison Avenue
4th Floor
New York, NY 10010
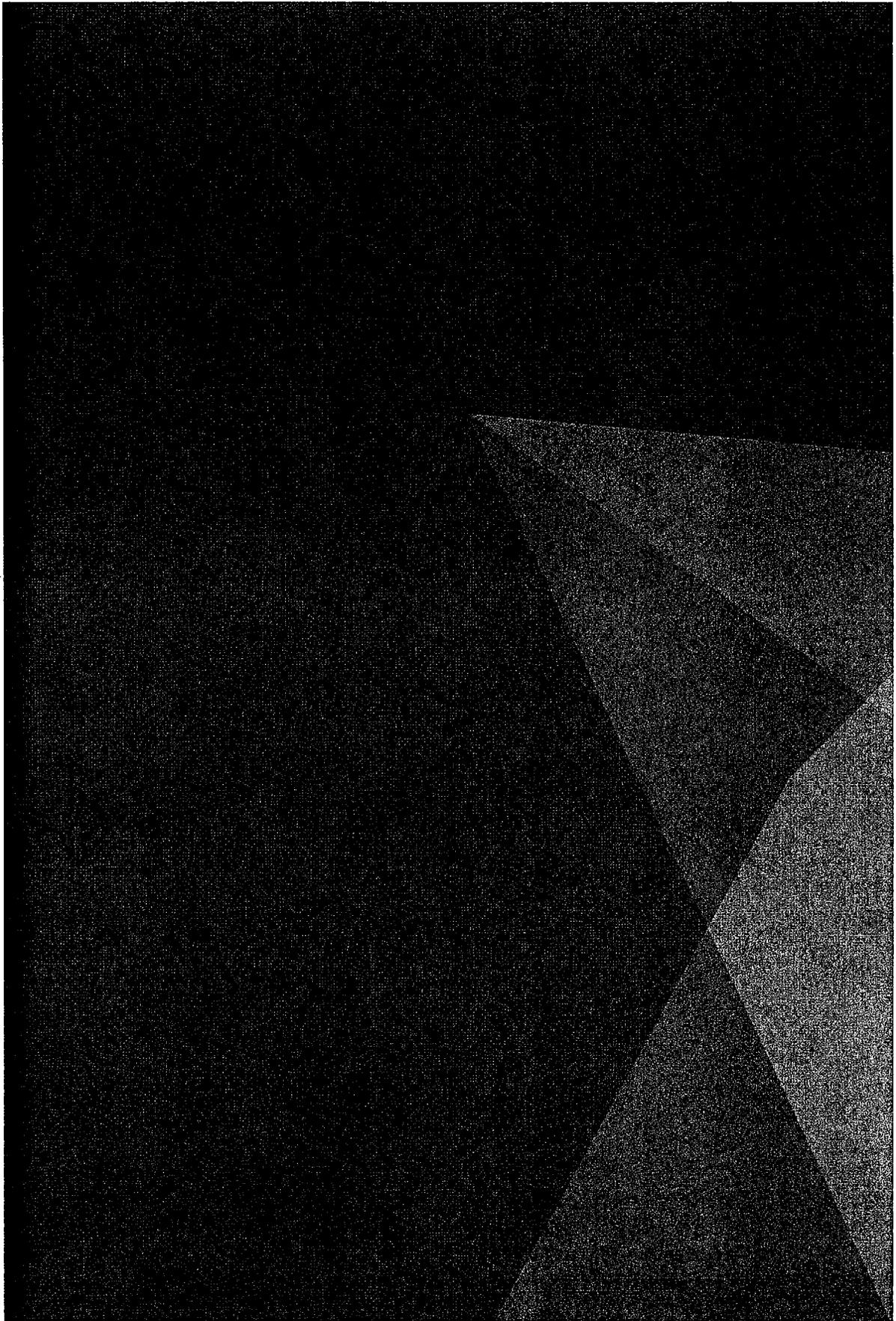(212) 244-1144

London

Butler House
177–178 Tottenham Court Rd
London W1T 7NY
+44 (0) 203 402 1715

Berlin

Münzstraße 19
10178 Berlin
Germany
+49 30 3087 4620

Toronto

250 Augusta Ave
3rd Floor
Toronto, ON M5T 1N9, Canada
(212) 244-1144

AGENCY RTB LANDSCAPE

HOLDING CO.	TRADING DESK	AGENCIES	SELECT RTB CLIENTS
IPG	Cadreon	Hill Holliday Initiative Lowe & Partners Mullen Universal McCann	American Airlines Chrysler Dodge Geico
OmnicomGroup	Accuen Media	OMD Worldwide PHD	Hilton Hewlett Packard Nissan State Farm Insurance Pepsi
PUBLICIS	Vivaki	Digitas Moxie Publicis Modem Razorfish Starcom MediaVest Zenith Optimedia GM Planworks	AMEX US AstraZenica/Symbicort Blackberry Gerber Life GM/Chevrolet Microsoft Safeco State Farm Insurance Verizon
WPP	The MIG Xaxis	Ogilvy & Mather Team Detroit **GROUP M** Mindshare Maxus MECi MediaCom	21st Century Insurance AT&T Dominos Pizza Kodak Mazda Royal Carribean Sprint Volkswagen
HAVAS	Multiple	MPG Media Contacts	Tyson Carnival Cruises
MDC	Varick MM	kbs + p The Media Kitchen DotGlu IMS	Windstream Armani Exchange BMW Vanguard

These are the agency players using RTB through Admeld as of August 2011.
Updates at www.admeld.com/agencyrtbmap

AGENCIES THAT GO DIRECT TO DSPs

AGENCIES	SELECT RTB CLIENTS
Camelot	Southwest Airlines Neiman Marcus
Cole & Weber	Capella Capital One
iProspect	Estee Lauder
Mediasmith	NetApp Citrix Online
Morpheus Media	NYTimes
Ocean media	Overstock.com
CompassPoint	Red Baron Pizza
Fallon	Traveler's Insurance

TECHNOLOGY DIRECTORY

ACCORDANT
accordantmedia.com

ADNETIK
adnetik.com

ADVERTISING.COM
advertising.com

APPNEXUS
appnexus.com

BRANDSCREEN
brandscreen.com

BUYSIGHT
buysight.com

CHANGO
chango.com

CONTEXTWEB
contextweb.com

CRITEO
criteo.com

DATAXU
dataxu.com

DOTOMI
dotomi.com

INVITE MEDIA
invitemedia.com

LUCID MEDIA
lucidmedia.com

MAXPOINT INTERACTIVE
maxpointinteractive.com

MEDIA6 DEGREES
media6degrees.com

MEDIABANK
mbxg.com

MEDIAMATH
mediamath.com

MYBUYS
mybuys.com

NETMINING
netmining.com

PERMUTO
permuto.com

QUANTCAST
quantcast.com

RADIUMONE
radiumone.com

ROCKETFUEL
rocketfuelinc.com

SIMPLI.FI
simli.fi

SITESCOUT
sitescout.com

SOCIOMANTIC
sociomantic.com

THE TRADE DESK
thetradedesk.com

TRIGGIT
triggit.com

TUBEMOGUL
tubemogul.com

TURN
turn.com

YAHOO
yahoo.com

XA.NET
xa.net

X+1
xplusone.com

Admeld

A Brief Overview of the Mobile App Ecosystem

September 13, 2012

WORLD PRIVACY FORUM

FPF
FUTURE OF
PRIVACY FORUM

Presenters

- Pam Dixon, Executive Director, World Privacy Forum
- Jules Polonetsky, Director and Co-Chair, Future of Privacy Forum
- Nathan Good, PhD, Chief Scientist at Good Research
- Ron Soffer, Independent App Developer, former app developer for WebMD
- Adam Towvim & Matt Tengler, VP of Business Development & Product Director at Jumptap
- Lia Sheena, Legal & Policy Fellow at the Future of Privacy Forum

Agenda

- Mobile Ecosystem Chart
- App Business Models
- Mobile Web Browser Overview
- Mobile Application Ecosystem
  - Data that can be Collected
  - Technical & ToS Permissions
  - Notice & Design Considerations
  - More on types of data: Location, Photos, & Contacts
  - Identifiers & Tracking
  - Tracking & Opt-out Options
- Questions

The Mobile Ecosystem

What is potentially involved in a for-profit mobile app

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Content

Customers

Development
All the things related to
building, deploying and
maintaining the app and
app infrastructure

For Profit Mobile App

Data
- Gathering Data
- Sharing Data
  - with a Service Provider
  - with a Monetization Intermediary
- Storing Data
- Analyzing Data

Monetization
- Advertising
- Subscriptions
- In app purchases
- Paid Download
- Business Relationships / Sponsorships

Mobile Platform
- Apple iOS
- Google Android
- Windows Mobile

App Business Models

PAID
DOWNLOADS

FREE;
AD
SUPPORTED

FREEMIUM;
IN-APP
COMMERCE

FREE;
IN-APP
REFERRALS

Remove Ads?

Would you like to remove the ads for $2.99? The extra space will be used for larger fonts and images. Ads will be removed on any device linked to your Apple ID.

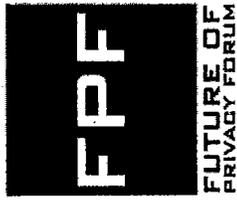**Remove Ads**

I've Already Bought This

No Thanks

CC OR VERLANDER?
FIND OUT WHO HAMILTON CHOSE
IN THE FREE DIGITAL MAGAZINE, SWAG

Earn Awesome Points

Earn Awesome Points   Offers by Tapjoy

Sign up for Tapjoy
123 Complete a quick action.
6 Awesome Points
FREE

24 Hour Fitness: Free 7 Day Pass!
123 Complete a quick action.
10 Awesome Points
FREE

Delicious Diabetic Desserts – FREE Recipe Guide!
123 Complete a quick action.
2 Awesome Points
FREE

Sign up for Netflix!
123 Complete a quick action.
106 Awesome Points
FREE

Sign up for Gamefly.com
123 Complete a quick action.
127 Awesome

Mobile Web Browsers

- Typical Mobile Browser Privacy Controls
  - Clear cookies
  - Clear history
  - Clear local storage

- Safari
  - Default browser on iOS
  - Third-party cookie limitations
  - Clearing cookies also clears Local Storage

- Android
  - "Browser" is default; users can manually install the Chrome browser app

- Mozilla
  - Do Not Track functionality in mobile browser on Android: "Tell sites not to track me"

Native, Web, or Hybrid Apps
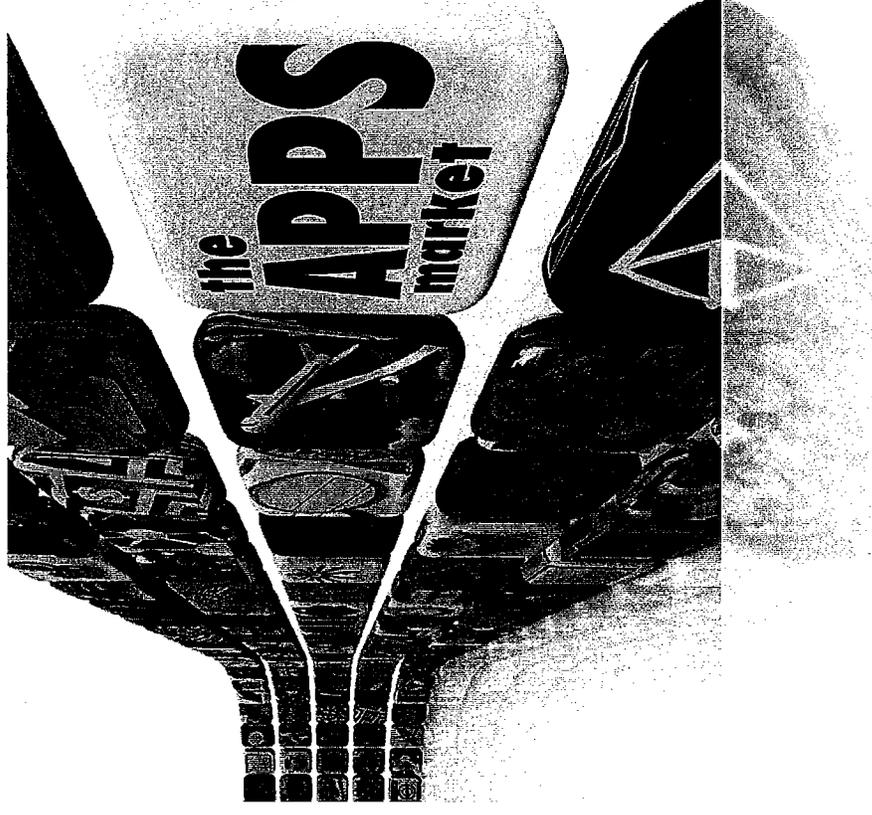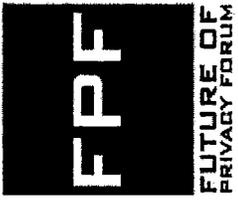
- Native app (iOS, Android, Java)

- Web app (HTML5)

- Hybrid App

Mobile App Ecosystem
Data Collected Can Include:

- Contacts
- Photo Library
- Videos
- Camera/Video Sensor
- Microphone
- Text Messages
- Dialer
- Calendar Items
- Location
- Reminders
- User entered info
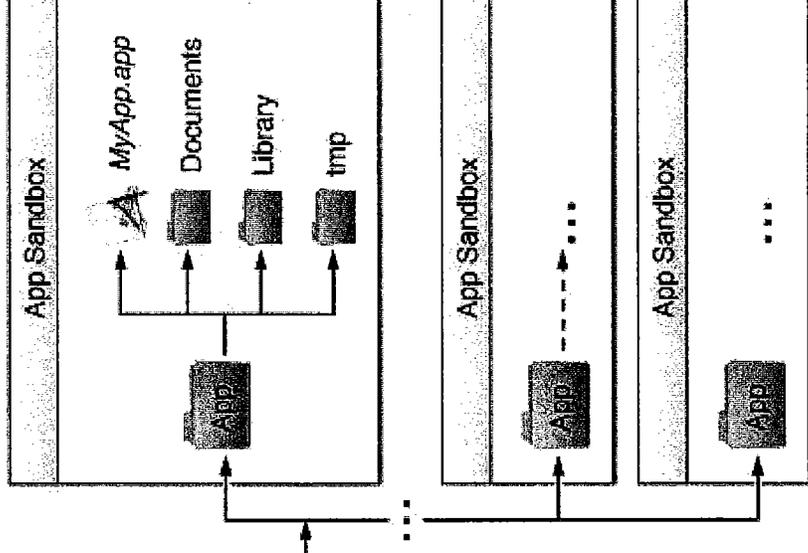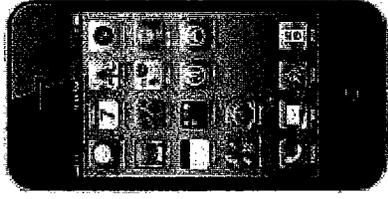- Social Integration features

Handling of Sensitive Data

- Health
- Financial
- Children

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The Apple iOS Approach

App Store Review Plus Sandboxing

- "For security reasons, iOS places each app (including its preferences and data) in a sandbox at install time. A sandbox is a set of fine-grained controls that limit the app's access to files, preferences, network resources, hardware, and so on. As part of the sandboxing process, the system installs each app in its own sandbox directory, which acts as the home for the app and its data."

- "**Important** The purpose of a sandbox is to limit the damage that a compromised app can cause to the system. Sandboxes do not prevent attacks from happening to a particular app and it is still your responsibility to code defensively to prevent attacks. For example, if your app does not validate user input and there is an exploitable buffer overflow in your input-handling code, an attacker could still hijack your app or cause it to crash. The sandbox only prevents the hijacked app from affecting other apps and other parts of the system." (iOS Developer Library)

http://developer.apple.com/library/ios/#DOCUMENTATION/iPhone/Conceptual/iPhoneOSProgrammingGuide/TheiOSEnvironment/TheiOSEnvironment.html

Technical Consent/Permission Models: Apple iOS

When does the OS automatically trigger a request for user permission before providing data?

Location Status
Arrow icon appears
when location is
accessed

Welcome to

"Yelp" Would Like to Use
Your Current Location

Don't Allow   OK

Camera Roll

"Mixel" Would Like to Use
Your Current Location

This allows access to location
information in photos and videos.

Don't Allow   OK

- Location data
  - Apps that need access to location including apps with access to photos and videos
    - Triggers opt-in consent pop-up prior to use
- Access to other data without declaring in iOS5 API
  - BUT new in iOS6: app developer must request access to Photos, Contacts, Reminders, and Calendar access which will trigger opt-in consent pop-up

Apple iOS

Ability to Edit Permissions & Add New Permissions

- Location Opt-in Notice
  - Access to location always triggers a pop-up consent request
  - Developer can edit and add information about the request in the description
- Developer can Optionally Trigger other Permissions, e.g. pop-up permission prior to accessing or uploading contacts onto a server

"Dragon Go!" Would Like to Use Your Current Location

This data will enable a significantly enhanced user experience, enabling things like "near me" searches for businesses, restaurant, landmarks, driving directions and more.

UNITED STATES

Don't Allow   OK

Contacts

To find family and friends. Path needs to send your contacts to our server.

Don't Allow   OK

Technical Consent/Permission Models:
Google Android

Community Review Plus Per App Sandboxing

- Developer decides permissions that the app will have

- Permissions declared to user before install

- Permissions cannot be changed while the program is running, they are static

- Permissions allow for granular access and control of various parts of the phone as well as customer data

- Apps can be downloaded from the default Google Play app store or from independent app store

Setting Permissions on Android

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Actions Permissions

Personal Info Permissions

Hardware Sensor Permissions

System Actions Permissions

Determine permissions needed
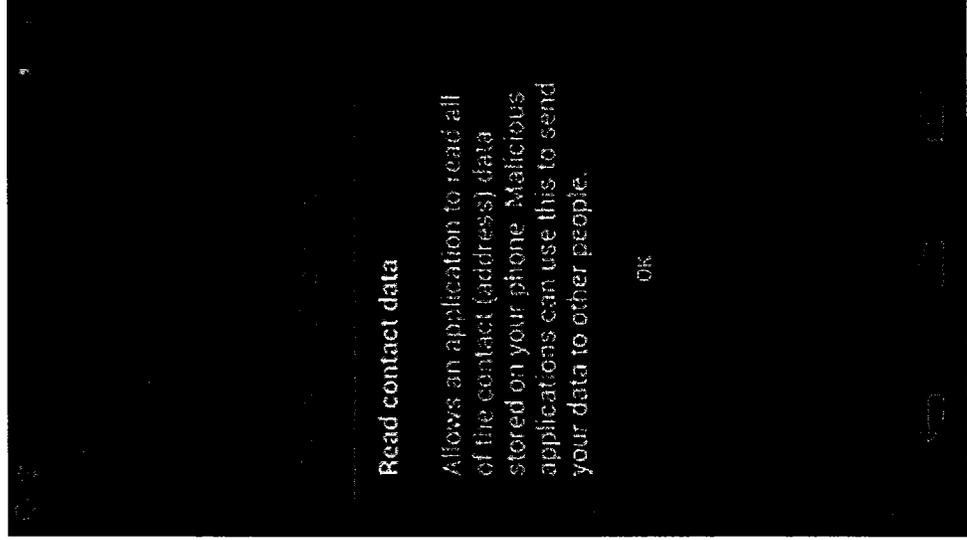
Describe permissions needed

Display permissions to user
User chooses to install or not

Android Permissions: Setting them up

- Developer creates a file called a manifest that has the permissions

```
<uses-sdk android:minSdkVersion="5" android:targetSdkVersion="5" />
<uses-permission android:name="android.permission.GET_ACCOUNTS" />
<uses-permission android:name="android.permission.READ_CONTACTS" />
<uses-permission android:name="android.permission.WRITE_CONTACTS" />
```

Android Permissions
What the User Sees

Apps

Path

Accept & download

PERMISSIONS

Storage
Modify/delete USB storage contents

System tools
Prevent phone from sleeping

Your location
Coarse (network-based) location, fine (GPS)
location

Phone calls

Read contact data

Allows an application to read all
of the contact (address) data
stored on your phone. Malicious
applications can use this to send
your data to other people.

OK

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Technical Consent/Permission Models:
Google Android

- Up Front Notice designed to:
  - Limit dialog boxes
  - Provide transparency on programs actions before install
  - Give the user install/don't install choice before installation
  - Be decided on before the program runs
- Security Architecture Limitations
  - Reliance on one time customer consent and user attention upfront
  - "Android has no mechanism for granting permissions dynamically (at run-time) because it complicates the user experience to the detriment of security."
    http://developer.android.com/guide/topics/security/permissions.html

Terms of Service Consent Rqmts

Apple iOS

- "You must provide clear and complete information to users regarding Your collection, use and disclosure of user or device data." *Section 3.3.10 of the iOS Developer Program License Agreement.*

- "If consent is denied or withdrawn, Applications may not collect, transmit, maintain, process or utilize such data or perform any other actions for which the user's consent has been denied or withdrawn." *Section 3.3.13 of the iOS Developer Program License Agreement.*
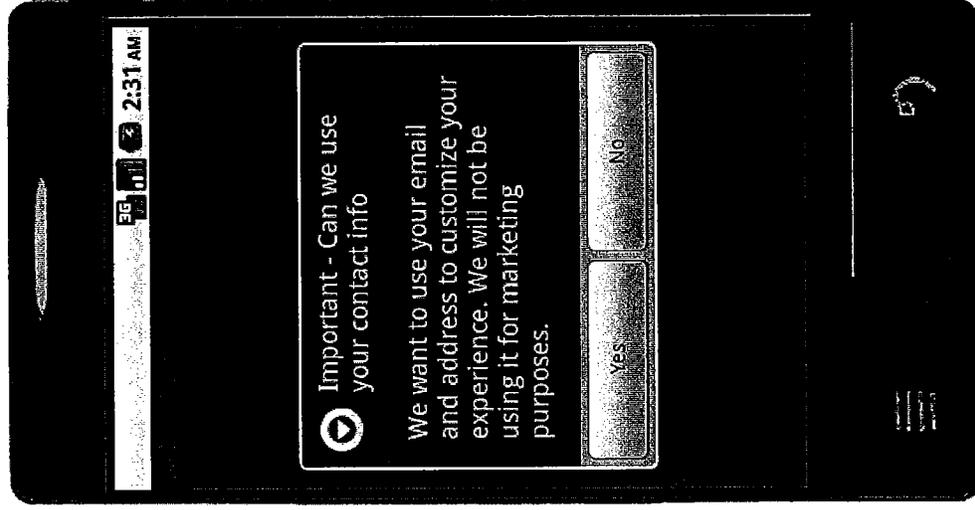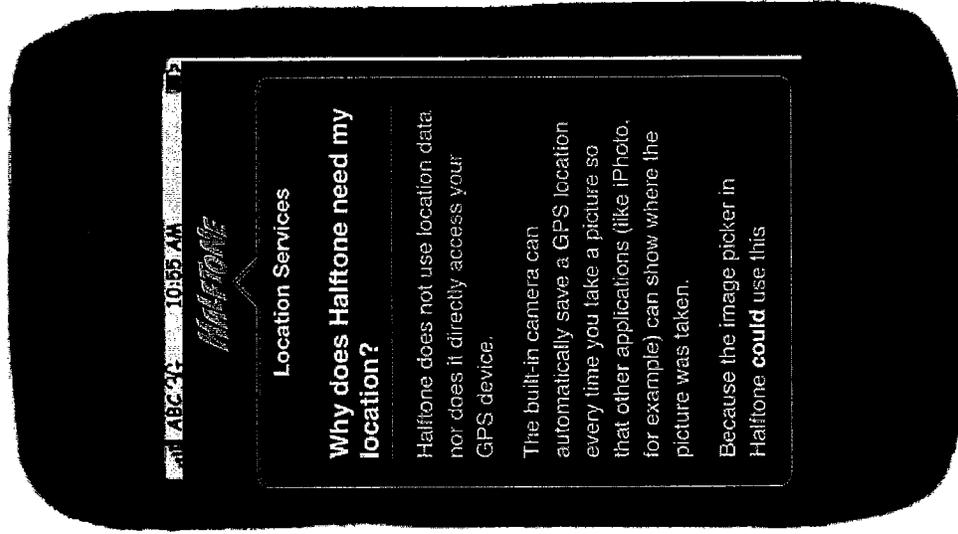
Google Android

- "If the users provide you with, or your Product access or uses, user names passwords, or other log-in or personal information, you must make users aware that this information will be available to your app, and you must provide legally adequate privacy notice and protection for those users. Further, your Product may only use that information for the limited purposes for which the user has given you permission to do so." *Section 4.3 of the Android Market Developer Distribution Agreement.*

Microsoft

- "If your app enables access to and the use of any Internet-based services, or otherwise collects or transmits any user's personal information, you must maintain a privacy policy...Your privacy policy must (i) comply with applicable laws and regulations, (ii) inform users of the information collected by your app and how that information is used, stored, secured and disclosed, and (iii) describe the controls that users have over the use and sharing of their information, and how they may access their information. You must also provide access to your privacy policy in the app's settings as displayed in the Windows settings charm." *Section 3(f) of the App Developer Agreement.*
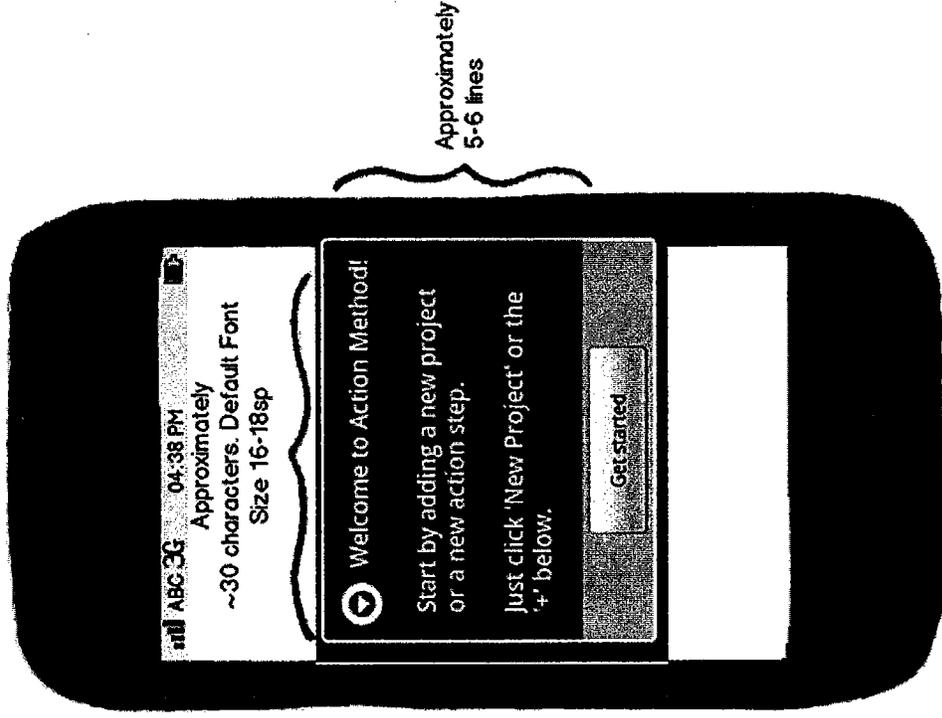
Additional (Optional) Notifications

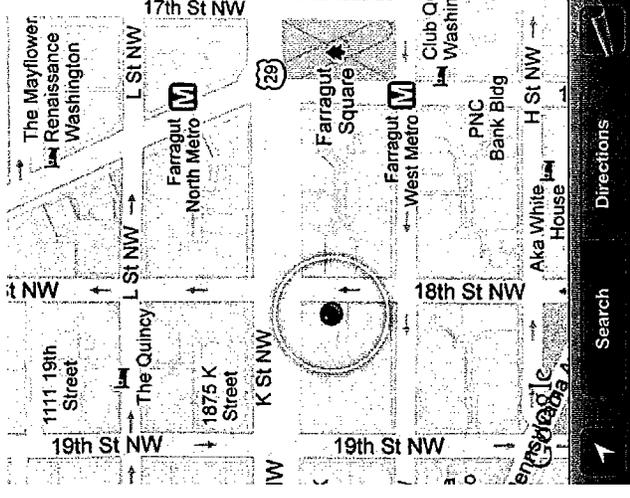## Adding Notice in Context outside of regular permissions

Location Services

Why does Halftone need my location?

Halftone does not use location data nor does it directly access your GPS device.

The built-in camera can automatically save a GPS location every time you take a picture so that other applications (like iPhoto, for example) can show where the picture was taken.

Because the image picker in Halftone **could** use this

Important - Can we use your contact info

We want to use your email and address to customize your experience. We will not be using it for marketing purposes.

Yes   No

Notice Design Considerations

- Screen Constraints
- Push notifications
- More than just popups, exploring alternate designs

Approximately 5-6 lines

ABC 3G   04:38 PM

Approximately ~30 characters. Default Font Size 16-18sp

Welcome to Action Method!

Start by adding a new project or a new action step.

Just click 'New Project' or the '+' below.

Get Started

Location

- GPS
- Wi-Fi
- Cell towers
  - Carriers and services that work with carriers, e.g. Locaid (subject to CTIA guidelines)
  - Coarse location (Android)
- Future? NFC

Contacts/Address Book

- Apple's ToS require app developers to request for access but not a technical permission yet (will be in iOS6)

- Android's ToS require app developer notify user of personal info available to the app which is technical permission to "read all of the contact (address) data stored on your phone"

```
const ABPropertyID kABPersonFirstNameProperty;
const ABPropertyID kABPersonLastNameProperty;
const ABPropertyID kABPersonMiddleNameProperty;
const ABPropertyID kABPersonPrefixProperty;
const ABPropertyID kABPersonSuffixProperty;
const ABPropertyID kABPersonNicknameProperty;
const ABPropertyID kABPersonFirstNamePhoneticP
const ABPropertyID kABPersonLastNamePhoneticPr
const ABPropertyID kABPersonMiddleNamePhonetic
const ABPropertyID kABPersonOrganizationProper
const ABPropertyID kABPersonJobTitleProperty;
const ABPropertyID kABPersonDepartmentProperty
const ABPropertyID kABPersonEmailProperty;
const ABPropertyID kABPersonBirthdayProperty;
const ABPropertyID kABPersonNoteProperty;
const ABPropertyID kABPersonCreationDateProper
const ABPropertyID kABPersonModificationDatePr
```
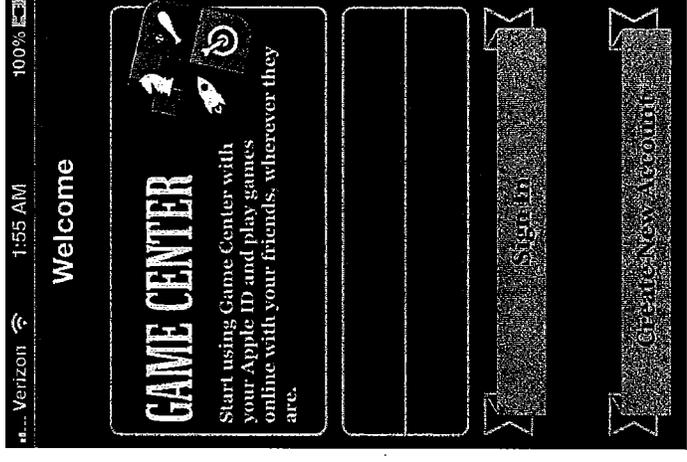
Photos & Calendar

- Photo/Video Library

  - Android doesn't currently have a specific permission for photo or videos; obtain access to photos and videos by requesting permission to read data from storage cards – subject to change

  - iOS triggers a location permission upon requesting access to "ALAssetsLibrary"

- Calendar & Reminders

  - Access to calendar on most mobile OSs, e.g. iOS, Android, and Windows

  - Cannot request access to phone reminders on iOS5, but will be able to in iOS6

Social Integration Features

- Facebook Connect
- Apple Game Center
- Twitter sharing
- Google+
- DeNa's Mobage
- Gree's Open Feint
- Papaya
- PlayPhone

Working with Third Parties

- Analytics SDK
- Ad networks SDK
- Other intermediaries
- Behavioral Advertising
- Data appending
- Exploits and abuses

What Types of Data do Ad Networks Typically Receive?

Data	App	Mobile Web	Notes
Device Type	■	■	
Operating System	■	■	
App / URL	■	■	
Mobile Network	■	■	When on 2/3/4G connection, IP based
IP Address	■	■	Server-to-server ad calls a challenge
Mobile Browser		■	
Carrier ID	■	■	Accessed via http headers
Device ID	■		UDID, Android ID, new iOS ASAdvertiser Manager, etc.
Location Data	■	■	Granularity varies based on user/ publisher, but access to precise geographic location only if app obtained user's consent
Ad(s) Supported	■	■	Dimensions, MRAID, VAST
Conversions	■	■	Data sharing varies across app / web

Identifiers & Tracking

- App cookies are sandboxed

- Concerns around the use of device identifiers for app tracking

- Security Mechanisms for device identifiers
  - Google AdMob requires that app developers send back hashed values of the UDID
  - Many leading ad networks now hash the identifiers they receive on Android and iOS

- Types of Identifiers Include:
  - Android ID; can be wiped upon factory reset
  - Apple UDID; linked to device, no controls to modify
    - In August 2011, Apple announced plans to deprecate UDID access
    - iOS6 provides alternative identifier that can reset by the user
  - MAC Address; linked to device hardware, no controls to modify
  - IMEI
  - MEID
  - Using iOS Pasteboard
  - Device Fingerprinting

Tracking & Opt-out Options

- Disparate identifiers = disparate opt-out solutions

- Mobile ad networks and other leading companies have begun to offer opt-outs

- No consistent and single opt-out across app and mobile web
    - Multiple steps to opt-out
    - Device identifier not easily accessible by user
    - Creating awareness of available opt-outs

- FPF lists some companies that currently provide mobile opt-outs @ **mobileprivacyoptions.org**

Tracking & Opt-out Options

Apple iAd opt-out

How to opt out of interest-based ads from the iAd network

Summary

This article provides instructions on how to opt out of receiving interest-based ads from the iAd advertising network.

Products Affected

iPad, iPhone, iPod touch, iTunes Store

http://oo.apple.com

If you do not want to receive interest-based ads on your iOS device with iOS 4 (or later), you can opt out by accessing the following link on the device: http://oo.apple.com. The message "You have successfully opted out" will appear and you will be automatically opted out of interest-based ads. You can always opt back in at any time by visiting http://oo.apple.com from this device.

LeadBolt opt-out app

Flurry opt-out

Smartphone: Select one...

Device Identifier

Opt out

Jumptap opt-out

Jumptap

Jumptap Opt Out

Currently, the ads you receive on this device from Jumptap are tailored to your interests. You can opt out of this service by clicking the button below. However, please note the important limitations of this opt out.

Opt Out

Important limitations of this opt out

- If your browser's cookies are deleted, you will need to opt out again
- The information used by mobile apps to anonymously identify users is different from that which is available in your mobile browser. To opt out in mobile apps you will need to take the additional step specified below based on your phone type
- To opt out in apps on iPhone, iPad or iPod devices you will need to submit your UDID here
- To opt out in apps on your Android device you will need to submit your Android ID here

Google AdMob Opt-out

Verizon 5:09 PM 1%

Reset

Reset if you would like to clear your ads preferences and associate new interests and inferred demographics with a new anonymous ID.

Reset

Opt out

Opt out if you prefer ads not to be based on interests and inferred demographics. By opting out, your device identifier information will not be used by Google for advertising going forward.

Opt out

These preferences only apply to the "Ads by Google" and "Ads by AdMob" you see within mobile applications on this device. To manage your ads preferences for "Ads by Google" you see on websites, visit the Ads Preferences page for
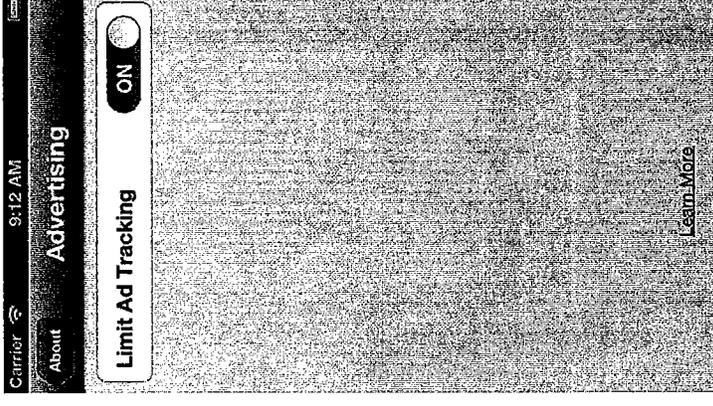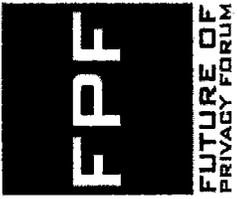
BREAKING NEWS:
New Privacy Controls in iOS6

Ad Tracking

iOS 6 introduces the Advertising Identifier, a non-permanent, non-personal, device identifier, that advertising networks will use to give you more control over advertisers' ability to use tracking methods. If you choose to limit ad tracking, advertising networks using the Advertising Identifier may no longer gather information to serve you targeted ads. In the future all advertising networks will be required to use the Advertising Identifier. However, until advertising networks transition to using the Advertising Identifier you may still receive targeted ads from other networks.

- "Limit Ad Tracking" is off by default. When the user turns it on, the identifier for advertisers, "ASAdvertiserManager," can only be used "for the following purposes: frequency capping, conversion events, estimating the number of unique users, security and fraud detection, and debugging."

Questions?

FPF
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THANK YOU!

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Research for this presentation was prepared by Lia Sheena and Nathan Good with input from presenters.