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Getting Real
Ad Exchanges, RTB, and the Future of Online Advertising

What do you get when you combine advanced audience targeting, inventory-trading platforms or ad exchanges, and technology-driven optimization? For some publishers and advertisers it's the road to significant performance improvements in display-advertising campaigns. Alone or in combination with search tools, this enhanced performance promises to lift display advertising out of the shadow of search marketing and establish it as a more effective overall marketing medium.

This white paper focuses on the emerging ad exchange ecosystem and related technologies that are revolutionizing the way the online display-ad market works for both publishers and advertisers. As the chart below details, many sectors of the new ecosystem are attracting significant funding from "A List" investors.

This is a transformation driven by advertisers and increasingly also by publishers. Advertisers are demanding better marketplace transparency and efficiency, reduced transaction costs, and better opportunities to engage their target audience directly. Publishers, on the other hand, want better control of supply and pricing.

Already in the new decade, direct marketers and those brand marketers embracing online direct-marketing tactics are turning to more precisely targeted and timely display advertising. This change has been fueled by:

- The availability of deeper audience-insight and intent data from data exchanges and other emerging data providers, enabling advanced audience targeting.
- The implementation of real-time bidding (RTB) on inventory-trading platforms or ad exchanges, letting advertisers or their agents buy at value prices and deliver individual ad impressions to audiences visiting a publisher site in real time.
- The appearance of high-powered, number-crunching demand-side platforms, enabling progressively more useful and insightful analytics and optimization.

Recent Online-Advertising Investments

Type of Company	Company	Funding	Investors
Ad Exchanges	ContextWeb/ADSDAQ	\$38m	Draper Fisher Jurvetson
	OpenX	\$30.5m	Accel Partners, First Round Capital
	Ad Jug	\$6.5m	Tomorrow Focus
	AdBrite	\$35m	Artis Capital Management and Sequoia Capital
Demand Side Platforms	Invite Media	n/a	First Round Capital
	Turn	\$38.50m	Focus Ventures, Norwest Venture Partners
	MediaMath	\$14.16m	Safeguard Scientifics, QED Investors
	DataXu	\$17m	Menlo Ventures, Atlas Venture and Flybridge Capital Partners
	X+1	\$18m	Advanced Technology Ventures, Hudson Ventures
	Lucid Media	\$8.8m	Lake Street Capital, RLI Partners
	Triggit	\$0.85m	Charles Sprincin and Bay Partners
Supply Side Platforms	PubMatic	\$7m	Draper Fisher Jurvetson, Nexus India Capital
	RubiconProject	\$42m	Clearstone Venture Partners, Peacock Equity Fund
	Ad Meld	\$15m	Spark Capital and Foundry Group
Data Exchanges	eXelate	\$4m	Carmel Ventures
	Blue Kai	\$35.1m	Battery Ventures, Redpoint Ventures
Ad Management Platforms	Traffiq	\$17m	Court Square Ventures, Grotech Ventures, and Greenhill SAVP
	MediaBank	\$40.5m	New Enterprise Associates
	Appnexus	\$15.5m	Venrock, Kodiak Venture Partners, and First Round Capital
Brand Protection Platforms	AdSafe Media	\$2.5m	Coriolis Ventures
	Double Verify	\$13.5m	IVP, Blumberg Capital, First Round Capital
	mPire	\$19.8m	Draper Fisher Jurvetson and Ignition Partners

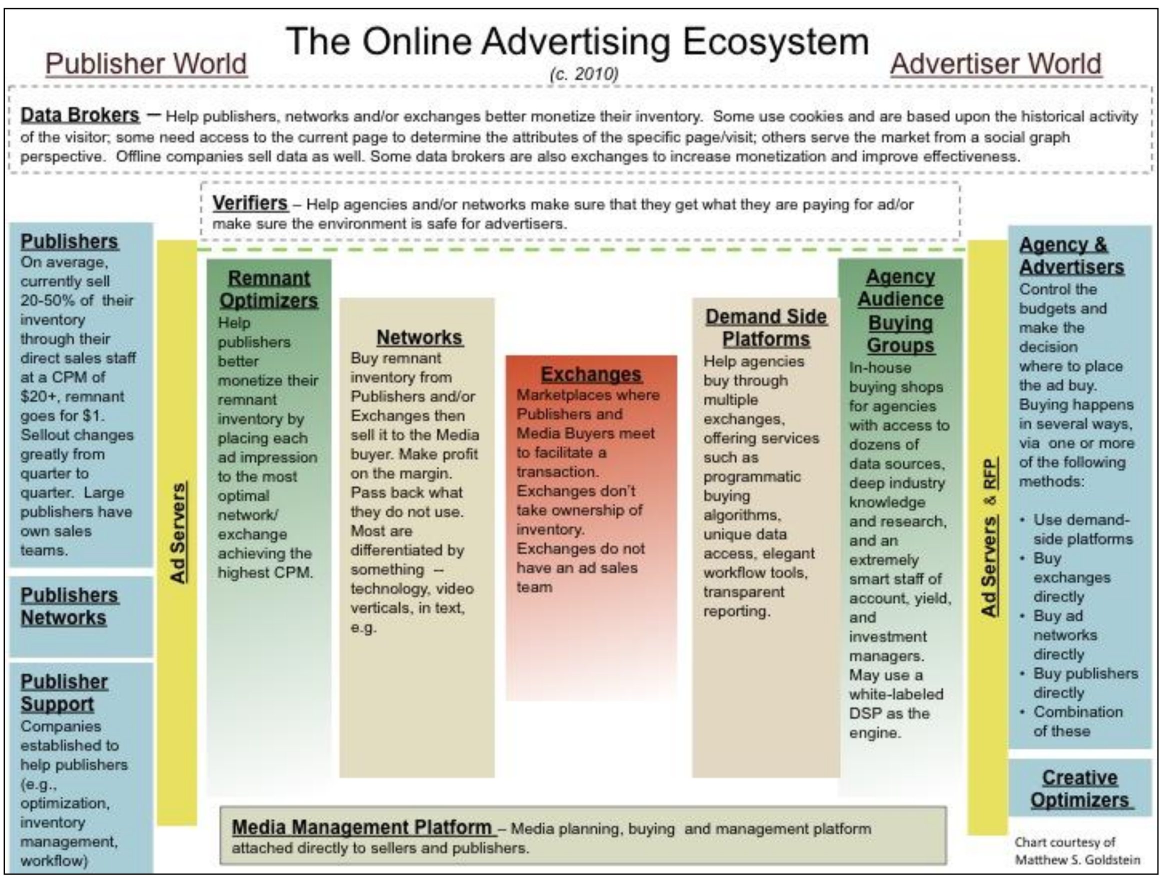
Sources: Crunchbase.com, ChubbyBrain.com, VentureBeat.com, Dealipedia.com

Since 2007, when nascent ad exchanges burst into the display market, these three areas have enjoyed intense innovation and startup funding. With real-time bidding rolling out across many ad exchanges and other inventory-trading venues, the next 18 months promise still further innovation, but also more intense competition and a consequent jostling for market position.

Aside from the widespread introduction of RTB, change will also result from individual company maneuvers, notably Google's re-launch and reworking of its ad exchange platform. In addition, the decision by current ad-exchange market leader Yahoo Right Media to focus only on premium inventory – while shuttering its non-premium business – has broad implications. Parallel to this is the almost pervasive implementation of RTB across ad exchanges, ad networks, and supply-side platforms, making biddable inventory available from a wider selection of sources than just ad exchanges. Supply-side platforms – which started out helping publishers better optimize inventory yield and sales-channel relationships – have embraced RTB most emphatically.

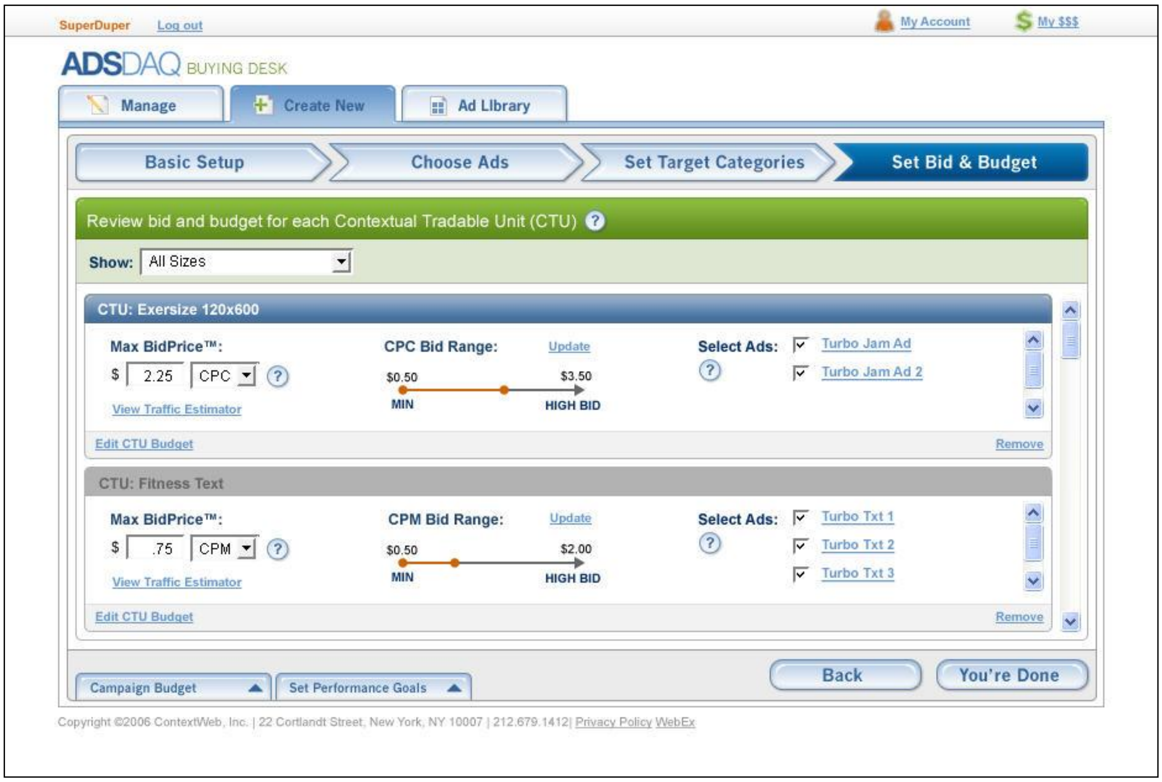
What are Ad Exchanges?

Simply put, ad exchanges are trading venues for ad impressions, enabling buyers to bid on available inventory. They connect marketers, ad agencies, publishers, and other sources and buyers of online display advertising. The seeds of change now sprouting across the online display ad market were planted in 2005 with the arrival of the first ad



exchanges. These promised improved price and inventory transparency for advertisers and better pricing for publishers as a result of bid-based pricing.

Right Media, which started up in 2005, was the first ad exchange. Other exchanges such as Ad ECN and ADSDAQ followed. Jump ahead two years, and ad exchanges were becoming a small but identifiable part of the display-advertising marketplace. As Yahoo completed its $680 million purchase of Right Media (following its earlier $45 million investment for a 20% stake) and Microsoft acquired AdECN for an undisclosed sum, 2007 proved a groundbreaking year for ad exchanges. The following year Google completed its $3.1 billion acquisition of DoubleClick, including the DoubleClick Adx ad exchange.



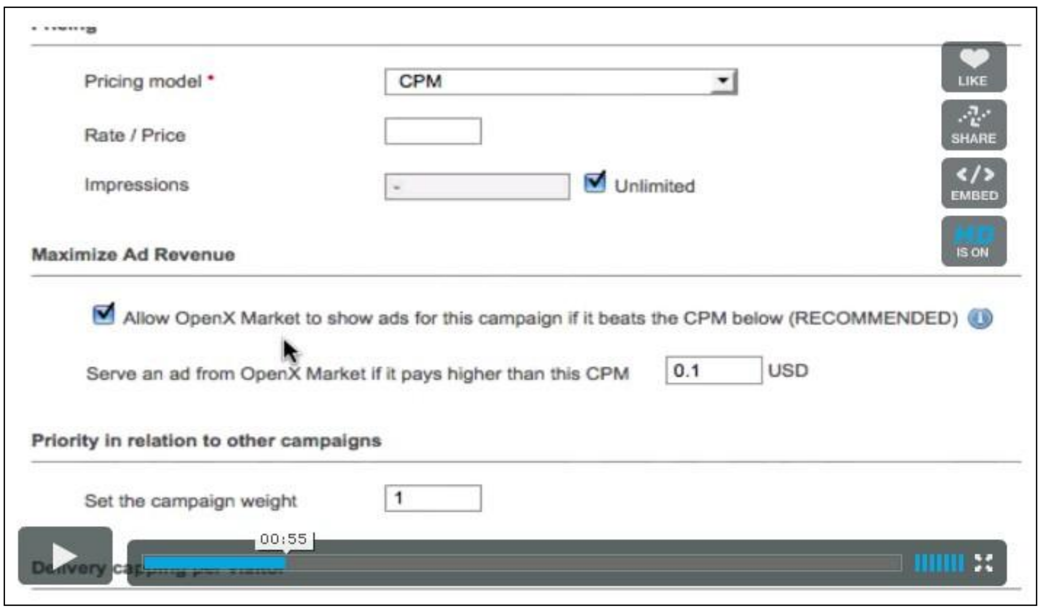
An ADSDAQ Ad Tracker's Bidding Screen

Why Ad Exchanges Are Needed

Before ad exchanges, ad networks emerged as a sales channel for major online publishers to dispose of unsold (remnant) inventory, and also for smaller publishers with no sales force to sell their entire display ad inventory. However, ad networks also created problems for the online display market that both ad exchanges and RTB attempt to resolve.

Ad networks realized they could flip so-called non-premium and remnant inventory by buying low and then bundling different publishers' inventory by audience profiles. These bundles could then be sold to marketers craving audience, turning a very tidy profit in the process. It seemed like a win/win situation. The ad networks gave small publishers a revenue stream while providing larger publishers with a way to monetize inventory that what would otherwise go unsold. For buyers (marketers and advertising agencies) it meant they could now get what they had always wanted: access to *their* audience, not the publisher's audience.

However, while ad networks got buyers thinking more explicitly about audience targeting, they were insufficiently clear about whom the audience being offered really was and how it was going to be reached. What publishers failed to foresee was that ad networks would make available huge amounts of non-premium, remnant and non-guaranteed inventory. As a result, supply grossly outstripped demand, driving down CPM rates not only for inventory the ad networks were selling but also for the publishers' premium, higher-margin inventory. From the publishers' perspective, their online display-ad inventory has been devalued by ad networks and undervalued in the minds of buyers. Publishers, moreover, have discovered that performance and direct marketers prefer to buy audiences they believe can in part be addressed through remnant premium impressions, rather than pay far more to buy the same or similar premium inventory directly from the publisher. The result is a vicious cycle: premium display inventory becomes harder to sell, and more of it goes unsold and becomes available on the ad networks, putting further downward pressure on premium-inventory pricing.



Entering Publisher's Ad Inventory on Open X Open Market

Ad exchanges attempted to break this cycle by establishing a price at auction based on the value advertisers infer (via their bids) on available display ad impression(s). If the bids by advertisers fall below the floor price set by the seller, the inventory remains unsold. The auction model itself encourages publishers to be more transparent since bids are more likely to find their true-value CPM the more informed the buyer (or automated trading system) is. This often means higher CPMs for publishers for exchange-sold inventory, as well as greater price transparency and increasingly improved inventory transparency for the buyer (thus tackling another problem created by ad networks: the lack of transparency in the market). What's more, without having to pay the high margins that ad networks make, publishers and buyers both get a better deal. However, as premium display inventory prices are starting to recover – in part due to smarter inventory management – many premium publishers, scarred from their experiences with ad networks, remain unsure whether to place premium inventory on ad exchanges.[1]

> Yahoo Right Media's decision to focus only on premium inventory – while shuttering its non-premium business – has broad implications.

How Ad Exchanges Make Money

The ad-exchange pricing model is fundamentally different from that for ad networks. Ad networks make money on the margin between what they pay for display ad inventory and what they sell it for. Ad exchanges deduct a flat fee from the CPM the successful bidder pays the exchange and the CPM the exchange pays the seller. Thus the money the ad exchange makes depends on the number of successful bids it processes, the flat fee the exchange can set, and any fees the exchange can earn for value-added services they offer buyers and/or sellers such as data and analytics.

Real Time Bidding Changes Everything

Much of the inventory on ad exchanges is available to buy and fulfill in real time. Practically speaking, though, delivery has frequently taken some tens of seconds after an accepted bid. The delay means some or all of the audience the buyer thought they secured has moved on. Consequently, the buyer has not gotten as good a deal as imagined. Also, buyers have had to take ad impressions in bundles (grouped by behavior or another characteristic), forcing them to pay the same price for all the ad impressions in a bundle although some are worth far more than others.

The implementation of true RTB changes the game. Because auctions and delivery are processed almost instantaneously and ad impressions can be bid on individually, the likelihood the buyer gets to address the audience they want to reach increases dramatically. The buyer has more scope to cherry-pick the ad impressions to bid on. With true RTB, marketers can bid on and buy individual impressions, or rapidly build custom block bids for impressions. This gives the buyer more flexibility, better value, and the ability to fine-tune their buys to meet their audience needs.

> Because the display-ad marketplace is increasingly technology-driven, those who control the best technology and use it wisely will prosper.

Choice for the buyer is also increasing dramatically as RTB is being implemented across a wide range of display inventory sources, including ad exchanges and some ad networks and supply-side platforms. All ad exchanges will likely offer true RTB by the second half of 2010, including OpenX Market and Microsoft AdECN. (In fact, Microsoft is replacing the current AdECN ad exchange with a new service.) Early published results from supply-side and demand side-platform providers show marketers achieving significantly improved response rates for campaigns using RTB.

Real-time bidding will also be the glue for melding display-ad marketing and search marketing. The beauty of combining search and display is the ability to guide a web user to media via search and then capture their attention with a contextually relevant, targeted and timely display ad. (Search essentially represents a form of intent data that enables the presentation of relevant display ads.) This obviously requires synchronization across these two forms of marketing, a process Google is well positioned to implement via RTB. Google highlighted the inclusion of RTB when it re-launched Google DoubleClick Ad Exchange in September 2009.

Demand-Side Platforms Offer Technology-Driven Optimization

With the arrival of ad exchanges and now RTB, a number of startups have entered the ad-exchange ecosystem, implementing systems and services to help advertisers use ad exchanges to their advantage in remnant display campaigns. As these systems have connected with more and more sources of biddable inventory, they have become known as demand-side platforms (DSPs.). Not all DSPs are the same. Some offer a services solution and others more of a technology solution or platform. This can be confusing to buyers, making it difficult to distinguish what is available and how it best suits their needs. Moreover, some ad networks/ad exchanges will reposition themselves as DSPs in order to get out of the way of Google's move on the ad-exchange market. At the same time, some market consolidation among existing DSPs can be expected even as new players join the fray.

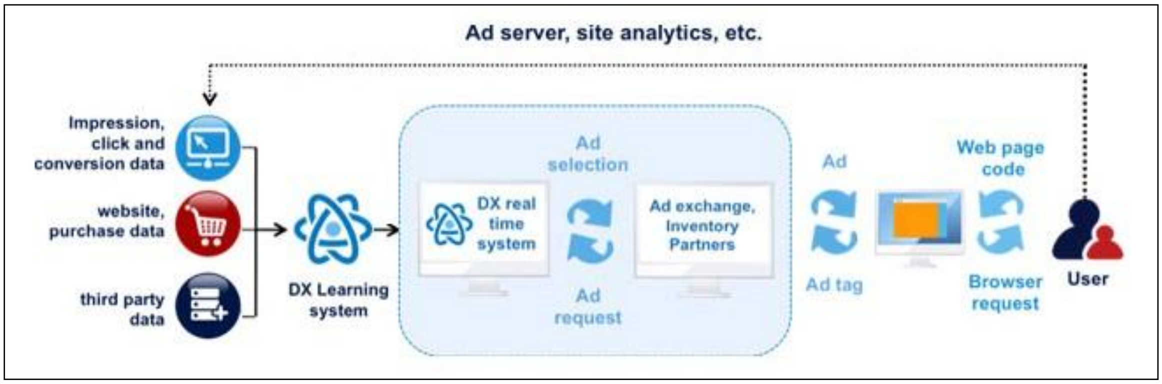
Many DSPs offer marketers or buyers sophisticated campaign-management and ad-management tools and automation, as well as bid-management and bid-optimization capabilities for exchange trading. Marketers or buyers are typically presented with tools that allow them to set up campaigns, specifying budgets, rate limits, goals and other parameters that will guide the computational engine at the core of the demand-side platform. Reports produced by the DSP about past campaigns help marketers and buyers plan and decide on parameters to enter for the new campaign. Once set up, the DSP executes and manages the campaign using advanced analytics and "decisioning algorithms" to value ad-impression opportunities, deciding how much to bid if at all.

End-to-end workflow for the MediaMath DSP

Some DSPs can optimize campaigns as they execute or provide performance data to let users change campaign parameters on the fly. A bid-management system inside the

DSP oversees the bidding process, including settlement of successful bids. The analytics and decisioning algorithms, which often use machine-learning techniques to enable self-optimization, are black box algorithms – the secret sauce and competitive advantage of the DSPs. What's more, ease of use, sophisticated and meaningful analytics and reporting, and real-time connectivity to a comprehensive range of biddable, RTB-enabled inventory sources, will all grow more common over the next year.

The ability to connect with many sources of biddable display inventory – offering users a single unified interface – is fast becoming a critical capability for DSPs. Moreover, the sources of biddable display inventory are growing as supply-side networks (discussed in the next section) and some ad networks start to offer RTB. One DSP in particular, Appnexus, has decided to compete on this connectivity part.



DataXu's Self-Optimizing Bid Management Workflow

Appnexus differentiates itself from other DSPs by focusing on connectivity to a wide range of sources of biddable display ad inventory. While it also provides similar ad management, reporting and analytics capabilities as other DSPs, Appnexus does not provide built-in algorithmic-trading black boxes. Instead, it offers its users, who are mainly direct marketers and performance marketers, a toolkit with which to implement their own proprietary algorithms. Direct marketers and performance marketers, already mathematically and analytically inclined, are more likely to feel at home developing their own algorithms. For algorithmically challenged clients, Appnexus offers professional services to develop custom algorithms.

Many premium publishers, scarred from their experiences with ad networks, remain unsure whether to place premium inventory on ad exchanges.

Appnexus is also notable for the pedigree of its management team, which is heavy with former Right Media and DoubleClick ad-exchange veterans, including Michael Rubenstein. Rubenstein ran Google DoubleClick Ad Exchange until shortly before Google DoubleClick Advertising Exchange 2.0 was launched. Besides Appnexus, other demand-side platforms include Turn (an ad network turned ad exchange that has added DSP capabilities), Invite Media, MediaMath, Triggit, and DataXu.

There will likely be some surprising new entrants into the DSP arena. A number of large companies have retained consultants to help them build their own DSP capabilities and avoid having to use third parties. However, the consultants helping these companies could themselves take what they have learned and implement their own DSP for the market. Accenture is one to watch, as it has been building its capabilities in digital marketing services and most recently secured a strategic relationship with Proctor and Gamble. And last October, Accenture became an investor in audience data provider Adchemy. Accenture intends to use Adchemy's technology and other tools to not only figure out the sort of person who is visiting a site, but also to deliver to the visitor a Web experience that is appealing and increases the chances of converting that person into a buyer. Accenture also has a strategic partnership with marketing software vendor Unica, which extended its digital marketing capabilities in February by acquiring the search bid management platform MakeMeTop. The Accenture and Unica combination is a potent one not only for corporations wanting to implement their own DSP, but also for Accenture to offer an outsourced DSP-like service.

True RTB changes the game. Because auctions and delivery are processed almost instantaneously, and ad impressions can be bid on individually, the likelihood the buyer gets to address the audience they want to reach increases dramatically.

The importance and interest in DSPs, all buzz aside, is evident in the amount of outside investment that DSPs – both service and technology providers – have received since 2007. With this funding, DSPs are enhancing their algorithms in addition to offering complete campaign and ad-management solutions, connectivity to all the available exchange and exchange-like markets, and greater ease of use. This is a competitive space where the vendors have mostly built proprietary technology platforms, eschewing strategic technology partnerships. However, the next evolution of the market is already pointing towards more tiered solutions with technology partners who can bring proven, very-high-performance solutions. For example, both Appnexus and MediaMath use the TwinFin data analytics appliance from Netezza (as does one of the agency giants).[2]

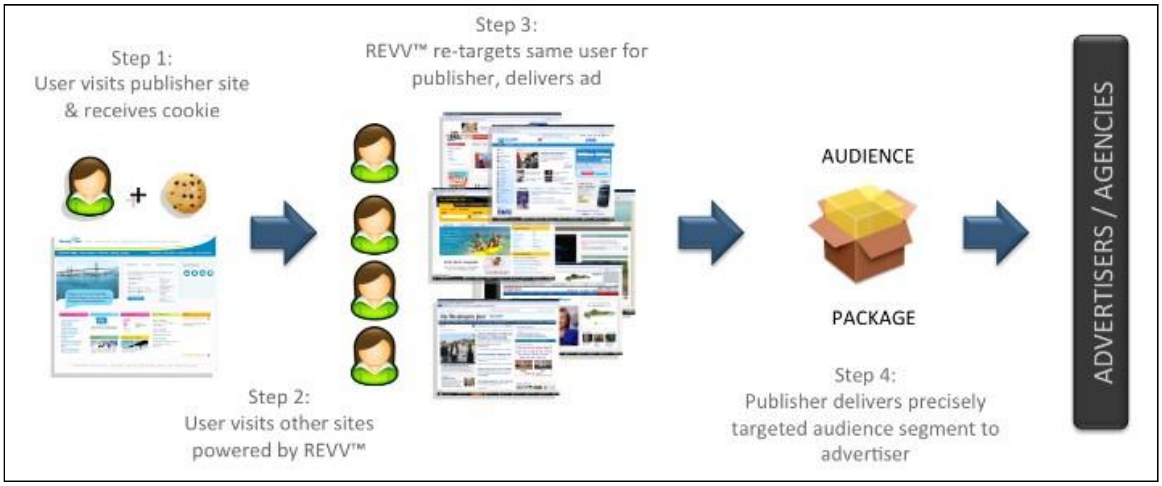
Real-time bidding is the glue for melding display-ad marketing and search marketing.

Many of the growing pools of ad inventory could benefit by adding the capabilities now seen in DSPs. Ad-agency buying groups or those within direct marketers could also benefit from owning their own DSP, enabling them to develop proprietary algorithms and to avoid dependence on one or two external providers for an essential piece of their ad-trading platform. The leading DSP providers each have exclusive or semi-exclusive deals with one or two of the global agency holding companies and some direct marketers. These links will prompt acquisition activity in the coming year, particularly involving ad exchanges or other biddable inventory sources. However, the agency holding companies may well balk at the hefty multiples DSPs are likely to demand, preferring in some cases to build their own DSP – or at least try. Development of an in-house DSP is already underway at least one of the global holding companies.

Supply-Side Platforms and What's Next for Them

Alongside the ad exchanges and DSPs, a new breed of supply-side intermediary is also appearing in the market. Supply-side platforms (SSPs) previously known as yield managers, help publishers optimize online-advertising inventory management, pricing, yield management, and the multiplicity of publisher sales channels. Leading supply side platforms, including The Rubicon Project, PubMatic, and Ad Meld have received substantial outside funding. They are growing quickly and are likely to be buyers of bolt-on capabilities in the near term before enjoying either public or private exits.

Having started as service and technology providers to help publishers better manage and price inventory and manage sales channels, supply-side platforms now find themselves among the largest sources of publisher display-ad inventory. Already these SSPs have begun rolling out RTB and consequently forging partnerships with DSPs.



The Rubicon Project's Supply-Side Platform/Ad Server delivering targeted ads for the Advertiser while protecting the publisher's data.

The SSPs are more likely to find favor with premium publishers since they can offer greater protection of their audience data and brand reputation. A mistake premium publishers made in the past was failing to protect their proprietary audience data against leakage and use by DSPs for retargeting campaigns. Premium publishers believe demand-side retargeting campaigns have contributed to depressing premium display CPMs. Premium publishers will be more likely to offer their premium inventory on exchange platforms that make ironclad guarantees to protect their brand reputation and proprietary audience data. In addition, those exchange platforms can help them as publishers manage the availability and ownership of select data in the marketplace.

Neutral exchanges or DSPs are not going to be as well positioned to offer premium publishers similar data-related guarantees and services.

With supply-side platforms morphing into supply-side exchanges (and given their existing relationships with publishers already in place), these platforms could impede Right Media's ambitions in the premium-exchange market. Right Media's decision to add DSP-like capabilities may not sit well with many premium publishers. With other ad exchanges also likely to try to refocus on the premium exchange market and with there being at least one incumbent (MediaBank), the premium exchange market will be an interesting one to watch over the next year. A number of outcomes are possible. For one, as it leaves its non-premium business behind, Right Media could look to build market share through acquisition, particularly by acquiring premium display inventory from other publishers, or by building out its DSP capabilities.

> A significant amount of ad trading will be automated, algorithmic trading, scanning across multiple exchanges and networks in search of optimal impression opportunities to meet campaigns goals and requirements. Unfortunately, this is not great news for New York restaurants and coffee shops, as this means buyers and sellers do not have to be near each other, wrenching apart the cozy world in which media buyers and sellers have tended to work side by side.

As the ad-exchange market starts polarizing between the supply side and the demand side, the question remains whether there is a place in the market for a neutral exchange. This is particularly relevant to Google, which has remained somewhat neutral in the search market. But because neutrality is likely not a long-term (or medium-term) option in the ad exchange market, Google will likely move to the demand side. Such a repositioning will have huge implications and raise significant questions across the entire marketplace.

Yahoo vs. Google: How the playing field changes

It is impossible to move on from discussing ad exchanges and auction-based inventory sources without considering the impact of Yahoo Right Media's repositioning announcement in November 2009, a little less than two months after Google launched DoubleClick Ad Exchange 2.0. Up until the announcement of the repositioning, Yahoo Right Media had been the ad exchange market leader, claiming 120,000 worldwide buyers and roughly 9 billion transactions being processed daily.[3]

Right Media began with a simple premise: non-premium inventory might be worth more by improving the odds that a buyer and seller find a match in an open, real-time market. Therefore, Yahoo's decision to shutter its non-premium exchange business to focus on becoming a premium exchange is a major event in the evolution of the ad-exchange market. On the other hand, Yahoo is confident that Right Media is an effective channel for selling Yahoo's own remnant premium inventory. The question is whether Right Media can convince skeptical publishers that it is also an effective channel for them as well. This may be a tough sell. As already noted, many premium-rated publishers (those that are in the ComScore 250 rankings) are convinced that making remnant premium inventory available to ad networks led to the collapse in CPMs not only for remnant but non-remnant premium inventory as well. This had a devastating impact for online advertising revenues at a time when offline advertising revenues for many big publishers were also in freefall. However, Yahoo at least has its own remnant premium inventory to get the party started. Most likely, Right Media won't stop at remnant premium inventory, but will try to innovate with other exchange models like a futures exchange for non-remnant premium inventory. It's not clear yet what this will look like. Will it be a futures auction market or something more? A reverse auction – where publishers bid for a buyer's business based on a request for proposal submitted by the buyer – is also a possibility. Traffiq operates a reverse auction marketplace along these lines. Alternatively, it might be possible for Right Media to set up an auction market for premium inventory for later delivery.[4]

> The ad agencies have never been sure whether Google is a partner or a competitor trying to maneuver around them to their clients. They rightfully fear that a move by Google to the demand side will take business away from their internal trading groups. Google could then offer a comprehensive DSP directly to some or many of the advertisers who are also the clients of the holding companies.

One looming question is whether Google will quickly come to dominate the marketplace for non-premium remnant inventory. The search giant undoubtedly has the capability to do this through its existing market relationships and through innovation around RTB and integration with its other types of inventory, including search, TV, and now mobile (via its acquisition of Ad Mob). With about $25 billion in annual search revenues, achieving significant year-over-year growth becomes more difficult. Google is looking at display-ad revenue to turbo-charge growth. It could seal the deal in the non-premium remnant ad exchange market by buying one or two of its competitors such as ContextWeb/ADSDAQ or OpenX Open Market and using its new RTB capabilities in DoubleClick Ad Exchange 2.0 to effectively integrate search and display advertising.

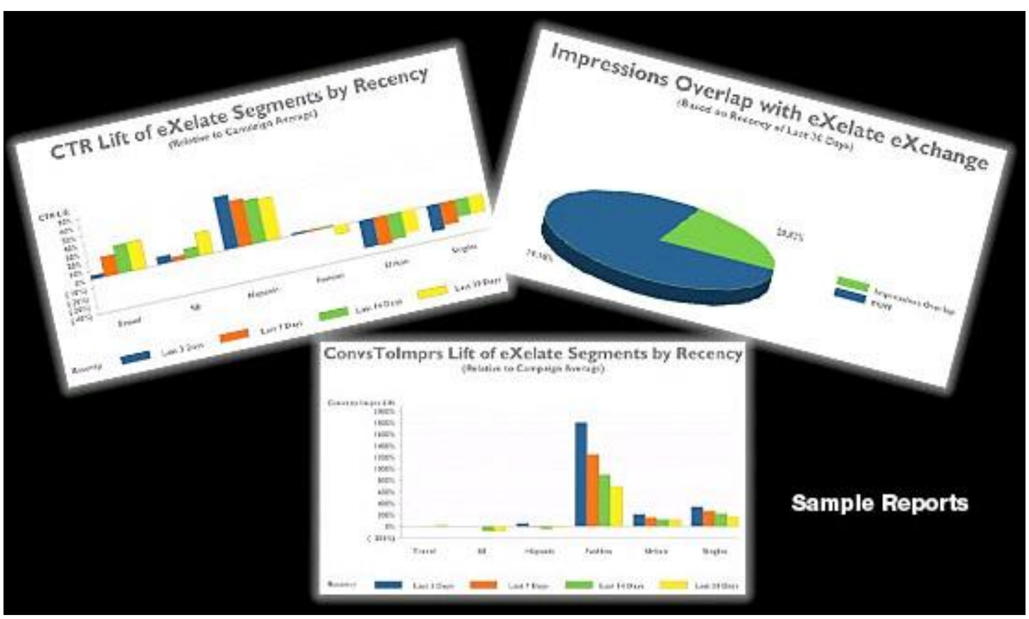
> Neutrality is not a long-term (or medium-term) option in the ad exchange market, so Google will likely move to the demand side.

Meanwhile, the worldwide ad agency holding companies, while seemingly embracing the ad-exchange model, also fear it now that Google has started to make its move. The relationship between Google and ad agencies has always been tense. The ad agencies have never been sure whether Google is a partner or a competitor trying to maneuver around them to their clients. As already noted, the ad agencies have been building their own demand-side capabilities, starting their own demand-side networks and ad-exchange trading groups. The fear is a move by Google to the demand side will take business away from the ad-agency trading groups. Google could then offer a comprehensive DSP directly to some or many of the advertisers who are also the clients of the holding companies.

It is more likely a question of when, rather than if, Google will build out its demand-side capabilities. Google may very well enter the space via an acquisition or two, although it unquestionably has the engineering firepower to build out its own demand-side capabilities. Google is going to be closely looking at the likes of Appnexus, MediaMath, Invite Media, and DataXu. As further evidence that this is the year Google is getting serious about display advertising, last November it purchased startup Teracent which it is integrating into its ad exchange. Teracent's technology is able to select from thousands of creative elements of a display ad in real-time, tweaking images, products, messages or colors. These elements can be optimized based on factors including geographic location, language, the content of the website, the time of day or the past performance of different ads. This represents a further shift in the direction of data-driven, targeted display advertising.

Advanced Audience Targeting: Data and the Emerging Data-Exchange Model

Advertisers are hungry for data that lets them make smarter, more targeted and timely online ad-buying decisions. The desire for data to reduce risk and boost ROI remains unabated and is driving innovation in collecting, aggregating, analyzing and processing all available data. Marketers, ad agencies, ad networks, and ad exchanges are all in the market for audience insight and intent data alongside media-profile and performance insight. To satisfy this need, data exchanges like eXelate and BlueKai have appeared in the market alongside offline direct-marketing data aggregators such as Acxiom and Experian, who have also entered the online market. Data exchanges provide a marketplace or auction market allowing publishers to offer audience data for sale to ad agencies, ad networks, and marketers, among others.



Audience Data Reports from eXelate

Data exchanges and other providers of audience insights and analytics will find themselves in a sweet spot in the market as ad agencies and marketers increasingly implement data-driven, targeted display campaigns online and across different display media. This includes mobile, social networking, and online video. Providers of mobile, geolocation, socialgraph, video, and other emerging types of audience data and analytics are already waiting in the wings to feed this hunger as the capabilities of DSPs and inventory exchanges extend to these other platforms.

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However, two unsettled issues could sharply curtail anticipated growth. First, it is already evident that premium publishers are seeking to manage the availability and ownership of their proprietary audience data in the marketplace. Data exchanges will need to offer publishers adequate guarantees and data-protection services for them to make their proprietary data available on the exchanges. (Yet in doing so the data exchanges may compromise the best interests of their ad-agency and other buyers.) Second, rulings on data privacy from the Federal Trade Commission (FTC) could derail the development of the data-exchange market by limiting products and practices.

Still, while the pace is uncertain, it is safe to say that the data and data-exchange markets will continue to grow and innovate, becoming an increasingly important part of the display-ad market.

Where Do We Go From Here?

Since ad exchanges first grabbed wide attention in 2007, many have attracted funding, allowing them to scale with demand and innovate. (See Ad Exchange investments on page 1.) However, with Google playing a pivotal role in the marketplace, existing ad exchanges are reevaluating their positions and strategies. Some will try new exchange models such as premium only or futures. One or two other ad exchanges will most likely decide that it is better to avoid competing against Google altogether and become demand-side platforms. If one were to make a prediction, the spot non-premium remnant market will eventually be surrendered to Google. However, opportunities for an exchange that is a sales channel for smaller publishers – such as Open X Market today – could remain.

> Only data exchanges that offer ironclad guarantees to protect brand reputation and proprietary audience data will win premium publishers as customers.

Audience and market fragmentation also continue with the emergence of new digital media formats and publishers. Display advertising will be available across media formats including mobile, outdoor, in-store, IPTV, addressable TV, tablets/ebook readers and more. This new inventory needs to be available to DSPs on current and new biddable-inventory sources as advertisers will increasingly want to run display campaigns integrating online and these new formats. This is forcing publishers, moreover, to also become ad-exchange traders in order to extend their reach in niche audience markets and across new formats when offering custom solutions directly to advertisers. Publishers will thus need access to DSP-like systems, instigating a search for partners and selective acquisitions.

> Consultants who have built DSPs for clients could themselves take what they have learned and implement their own DSP for the market.

This all points towards a display-ad marketplace that is increasingly technology-driven. As a consequence, those who control the best technology and who use it wisely will prosper. Those who fail on either or both counts will struggle to survive. The role of the exchanges or electronic markets themselves may pale into insignificance compared with the appetite for data and algorithmic innovation. DSPs in particular will connect ad traders to a growing number of sources of biddable inventory, including supply-side exchanges, publisher exchanges, existing exchanges and ad networks that become exchanges. A significant amount of ad trading will be automated, algorithmic trading, scanning across multiple exchanges and networks in search of optimal impression opportunities to meet campaigns goals and requirements. Unfortunately, this is not great news for New York restaurants and coffee shops, as this means buyers and sellers do not have to be near each other, wrenching apart the cozy world in which media buyers and sellers have tended to work side by side.

2010 is shaping up as a game-changing year for online display advertising. Already a new language is evolving around this changing, online display-ad marketplace. Research firm Forrester talks about Dynamic Media Buying Optimization (DBO) while others talk about Audience Relationship Management (ARM). DBO concerns the ability to buy and display individual ad impressions in real time as an ad-campaign executes, while ARM refers to tailoring and forging relationships with audiences before they become customers. To connect this new alphabet soup, ARM hands-off to Customer Relationship Management (CRM) where marketers can continually shape and act on relationships with new and existing customers in their customer database. What's more, forces reshaping web display advertising today will quickly spread to mobile, video, IPTV, addressable TV, and digital outdoor – and after that traditional radio and TV and other traditional media. While this will take some years to play out in full, the seeds are being sown now.

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There can be little doubt that in the online display ad marketplace a number of trends and developments are fast evolving and converging, creating opportunities for new entrants and incumbents alike. Nevertheless, the other side of this coin is that the drive for improved transparency, less complexity and fewer intermediaries is compelling incumbents to act quickly and decisively or risk being swallowed up or squeezed out.

Changes being set in motion now will result in a profound transformation of the display-ad marketplace. On the sellers' side, consolidation of sales channels will lead to significantly reduced duplication of available inventory and a more orderly market. Decisions made today by publishers and sales-channel intermediaries will have significant ramifications for publishers' future digital revenue and profitability. On the advertisers' side, two key forces are already in motion. First is the ever-increasing focus on marketing accountability and ROI. The other is an emerging game of musical chairs among the demand-side participants, especially between DSPs and ad-agency audience buying groups. They will continue to jostle for position as the new breed of 21st century digital marketing-services agencies. At the same time, some advertisers are taking more control of their digital marketing. They are implementing their own demand side platforms and internal digital marketing services agencies.

> Some ad networks/ad exchanges will reposition themselves as DSPs in order to get out of the way of Google's move on the ad-exchange market.

This is not a time for publishers, ad networks, ad agencies and others in the ecosystem to be complacent or hesitant as to their next steps. Failure to innovate and respond to evolving customer requirements will significantly undermine their future prospects and profitability.

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[1]A further longstanding complaint and concern of publishers and advertisers against ad networks is the potential for damage to their brand arising from unsuitable placement of advertising. Brand-protection platforms like AdSafe, DoubleVerify, and Mpire (whose screen shot is below) investigate audiences, media destinations, and advertisers to certify them to provide publishers and advertisers with greater assurance that online advertising will not be inappropriately placed. Services offered by brand-protection platforms range from preventing ads appearing on inappropriate sites to reporting on where ads have been placed inappropriately. That information can be input into future ad campaigns. These tools are just beginning to emerge and their accuracy is yet to be confirmed, but there is a growing need for this platform in some form.

[2] The analytics appliance market is also vast and evolving quickly. Other players include Teradata, Kickfire, Schnoor Information Technology. They share the goal of squeezing out the last ounce of performance while pushing down the cost.

[3] Google announced that Ad Exchange 2.0 not only offers RTB but also integration with AdWords and AdSense and as with its predecessor AdX tight integration with Google's DART display ad campaign management ad server service.

[4] A number of major publishers including AOL and CBS have withdrawn premium inventory from ad networks in recent months. As a result, it is unclear whether publishers will be willing to place their premium inventory on premium ad exchanges. Some major publishers, remnant premium inventory aside, will argue that selling premium inventory is something only their direct sales channel can do because it is often a highly customized sale to the advertiser. If premium inventory is traded on exchanges this will undermine the publishers' ability to customize and individually price solutions for advertisers. It is not clear how this will play out but it seems likely that publishers will increasingly need to segment premium inventory, holding back the most prized premium inventory while placing other, less-valuable premium inventory through indirect sales channels such as ad exchanges.

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Other

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