

Lies, Damned Lies...

The unpredictable world of online marketing & web analytics

July 18, 2008

Online Ad Business 101, Part III - Ad Networks

So far in my nascent [Online Ad Business 101 series](#), I've covered the overall [advertising value chain](#), and looked at a superficial level at [how an ad 'call' is actually handled](#). This installment brings together themes from those two first posts, by taking a look at ad networks.

As I have mentioned before, ad networks are in the media representation business. Even the biggest publishers don't typically have the resources to sell every last scrap of their available inventory day in, day out, so they hand over a portion of their inventory - the remnant inventory - to ad networks. Small publishers, on the other hand, have no resources of their own to sell their inventory, so they have to go to the market via networks. The networks aggregate all the inventory that they have available and then sell this inventory to advertisers.

Ad networks make money by selling the inventory for a higher price than they buy it. They can achieve this in a number of ways, which I shall list in broad order of sophistication/difficulty (with the easiest first):

- Simple arbitrage: The network buys from the publisher at a rock-bottom price (because the publisher would literally make nothing from the inventory otherwise) and sells the inventory on in larger aggregated blocks at a slightly higher price. The "value add" is small - the network is simply allowing the advertiser to soak up some remaining part of their budget without having to go to lots of individual publishers.
- Vertical aggregation: The network buys lots of small parcels of inventory in specific verticals (e.g. travel). It then aggregates the inventory for sale according to these segments, enabling it to charge a bit more. The advertiser is able to extend the reach of their campaign in a target audience without having to deal with lots of publishers.
- **Price model arbitrage**: The network buys inventory on a CPM (cost-per-thousand impressions) basis, providing the publishers with a nice, reliable revenue stream. But it sells the inventory on a CPC (cost-per-click) or CPA (cost-per-acquisition) basis, reducing the risk of the inventory for advertisers (who are only paying for success), and absorbing the associated risk itself. The network makes money on the difference between the CPM it pays publishers and the "effective CPM" (eCPM) it charges advertisers.
- Platform specialization: Advertising on emerging-media platforms such as video and mobile still requires quite a lot of specialized technology, forcing Rich Media vendors to build close relationships with the publishers that they deal with. Over time, many of the vendors in this space have gone the extra mile for their advertiser customers and turned themselves into networks, making it easier for advertisers to buy ads in these new formats across a range of publishers.
- Behavioral targeting: The [network buys inventory from publishers](#), and [when the ad call is passed over to the network, it drops a third-party cookie](#). By doing this across all its publisher clients, the network can build up a profile of users by cookie ID - knowing, for example, that cookie ID XYZ123 has visited ten sites about watersports in the past week. The network can then use this information to add value to the inventory it's reselling, enabling advertisers to buy "active surfer dudes" and the like.

Can you give me some examples?

Sure. Here are some examples of ad networks which (roughly) map to the types above. In practice, of course, most ad networks employ a combination of the above techniques to maximize the margin on the media they represent.

Simple arbitrage: Advertising.com

No doubt my description of [Advertising.com](#) as a "simple arbitrage" network will generate howls of protest from AOL (Advertising.com's parent company).



But one of Advertising.com's main value propositions is the breadth of sites and audience it can deliver. Because Ads.com deals with so many publishers, advertisers can almost always find some inventory that maps onto the audience they're looking for, and are happy to pay a (relatively) modest fee for the privilege.

Simple arbitrage 2: Google Content Network (AdSense)

No discussion of networks would be complete without a mention of Google AdSense. AdSense provides a way for lots of small publishers to make inventory available to the pool of advertisers that use Google Adwords - in addition to their ads appearing next to Google's search results, these ads can also appear on the small publishers' sites; the ads are matched with the sites on a contextual basis (the content of the site is crawled to extract keywords which then stand in for the keywords that advertisers normally bid against for paid search results).



A crucial feature of this system is that the publisher is paid on a cost-per-click basis, so assumes a big chunk of the risk - if no one clicks, the publisher doesn't get paid. Google makes its money on the margin between the cost-per-click they pay the publisher, and the cost-per-click they charge the advertiser. The value proposition lies in connecting lots of small (and large) advertisers to lots of small publishers who are running sites which have a really good content match to the advertiser's offering. In other words, if you manufacture Mongolian nose-flutes, AdSense allows you to get your ads onto all the Mongolian nose-flute fansites out there, with very little effort.

Vertical aggregation: Martha's Circle

Martha's Circle is the (rather winsome) name for the ad network run by Martha Stewart Omnimedia. It's a classic example of a publisher/media owner extending their brand (and saleable audience) by signing up sites in the same sector (in this case, lifestyle) and creating a niche network. For an advertiser wanting to reach thirty-something women with an interest in the home, this kind of network is a no-brainer when building a media plan. Glam.com is another good example, as is Fox Interactive Media.



Price Model Arbitrage: DRIVEpm

DRIVEpm is Microsoft's own advertising network, acquired with the acquisition of aQuantive last year. DRIVEpm styles itself as a "performance" network, meaning that it uses a variety of techniques (amongst them, price model arbitrage) to enable



advertisers to buy inventory on a cost-per-performance basis, whilst still paying publishers on a cost-per-thousand basis. Scott Howe, former GM for DRIVEpm and now VP for the Microsoft Advertising business unit, wrote a great article back in 2005 about some of the dynamics in a performance network from the perspective of a media buyer looking to get the best ROI. Well worth a read.

Platform specialization: VideoEgg

VideoEgg is a video advertising network (the clue's in the name, I guess). Its offering is a classic mix of innovative ad unit technology (their latest offering is something called "AdFrames") with a network attached. Another feature of VideoEgg is that it offers advertisers a CPE (cost-per-engagement) model for buying video advertising, performing the same kind of price model arbitrage that DRIVEpm is doing. Their publisher audience is widget & app developers for social media environments such as Facebook and MySpace, ensuring that their value proposition to advertisers is further differentiated (essential as the online video market becomes more crowded).



Behavioral targeting: Tacoda

Tacoda is also part of AOL's Platform A unit, and markets itself as the world's "first" behaviorally-targeted ad network (a hard claim to substantiate, but equally hard to refute). Tacoda tracks behaviors of the visitors to its network of over 4,000 sites and uses this information to associate behavioral profiles with those users. It then sells inventory on these sites on a user-target-group basis, rather than by group of site or content area. These "audience segments" have names like



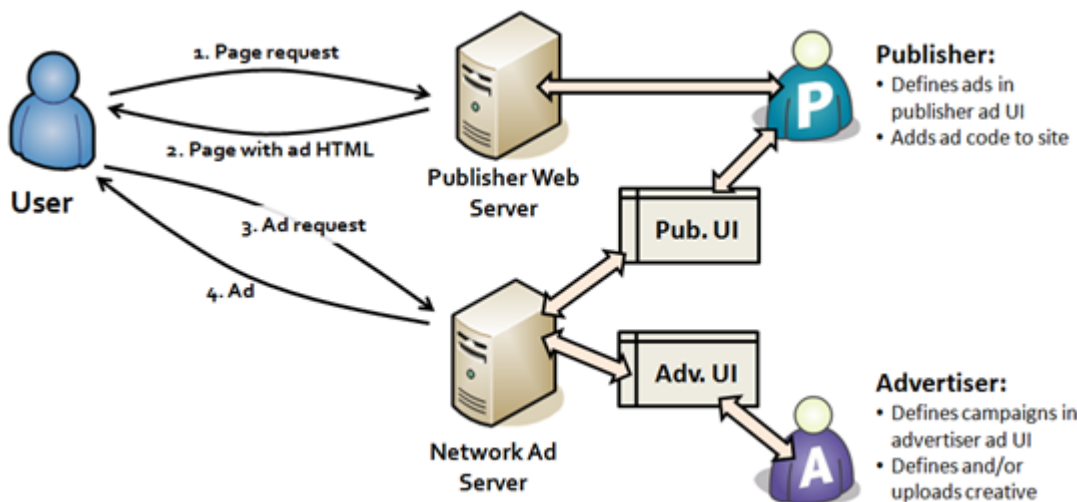
"Family Chef" and "Photo Bug".

How does it actually work?

Understanding how ad networks actually serve their ads is essential in understanding how some of the above business models (especially targeting) work. I'll cover two scenarios - a small publisher/small advertiser scenario, and a large publisher/large advertiser scenario.

Small publisher/small advertiser

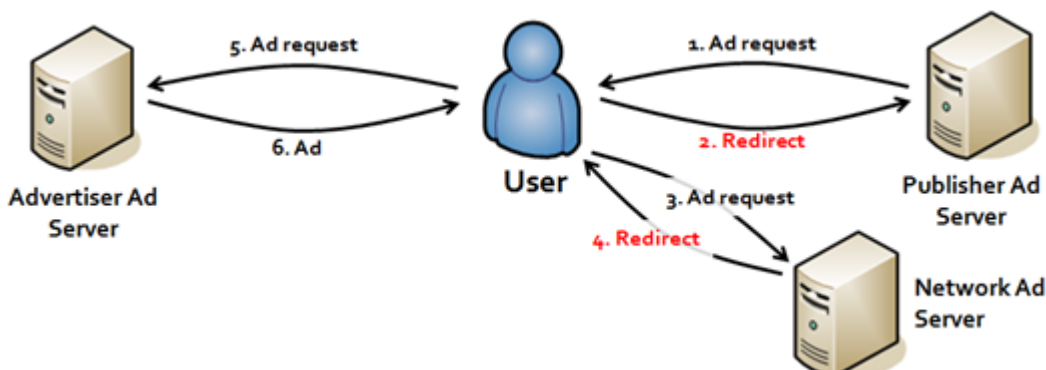
A **small publisher** will **insert their ad network's ad code directly onto their site** - in many cases, this is the only ad code the publisher is using, and is serving 100% of that publisher's ads. On the other side of the fence, the **ad network** may **provide a web UI to enable advertisers to create or upload ads**, and (possibly) **allow the advertiser to choose which sites (or groups of site) those ads will appear on**. The diagram below summarizes this (thanks to [Right Media](#) for the advertiser & publisher people icons):



Examples of this kind of system are Google AdSense and the Yahoo Publisher Network (these are often called "self-service" ad networks). The actual ad delivery model is pretty simple - the same ad server (the network ad server) functions as both publisher and advertiser ad server (the ad call path is on the left side of the diagram above).

Large publisher/large advertiser

When it comes to large publishers using ad networks to deliver inventory to large advertisers, things get more complicated. In this scenario, both the publisher and the advertiser will likely have their own ad servers. The publisher will configure its ad server to "hand off" a certain block of inventory to the network, whilst on the advertiser side, the advertiser ad server will be configured to buy a certain portion of a campaign from a network (or networks). So the ad call has to be passed from the publisher to the advertiser via the network:



It's the point at which the ad call passes through the network ad server when the network is able to drop a cookie on the

user's machine, enabling behavioral tracking and targeting (assuming, of course, that the users don't delete their cookies in the meantime).





Of course, hybrids of the two models above also exist: large publishers will sometimes hand over some of their inventory to a self-serve network, in particular, in which case the publisher's ad server calls the network ad server, which serves the ad itself.

This picture also becomes more complicated when you consider that many ad networks will pass the ad request on to another ad network if they themselves can't fulfil it (or fulfil it economically). So, for example, a targeted ad network may receive an ad call from a user it has no information about. Rather than serve an ad for that user at a low cost (and thereby preventing that ad impression from being served to another user at a higher cost), the ad network passes the ad call on to a "value" (read: cheap) network. So in the picture above you can have two, or even three or four, ad networks passing the ad call around like a hot potato.

This game of pass-the-parcel isn't really very good for the user, who has to wait a long time to see the ad (which really hurts the advertiser most, since a slow-loading ad might as well not render at all); and it's also not great from a security point of view, because the publisher is ceding control of a portion of their site's screen real-estate to an unknown network and an even more unknown advertiser. Which is why ad exchanges are emerging which provide a centralized clearing-house for inventory, thus dispensing with the round-robin approach described above.

Online Advertising Business 101 - Index of all posts

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Comments



Payam said...

quick question, how would you define companies like AdBrite who are basically an advertising marketplace? how do they come in to play? would you label them an "Ad Networks?"

[Reply July 20, 2008 at 04:58 PM](#)



[ian_d_thomas](#) said...

Payam,

Yes, I would classify AdBrite as an ad network, essentially of the self-serve variety. Though interestingly, AdBrite are developing something they call the "Open Targeting Exchange" (OTX), which provides (or claims it will provide) an environment for multiple third-party data providers to provide targeting data. In this respect, AdBrite (or OTX) is functioning a bit more like an ad exchange; a type of ad industry player I'll post more about in due course.

Ian

[Reply July 22, 2008 at 12:11 AM](#)



Drummer said...

Hey, I'm doing a presentation on display advertising evolutions as a key driver of future advertising growth. I am, however, a little stuck about the definition of an ad-platform and where it fits into the value chain/progress diagram.

Thakns~!

[Reply July 29, 2008 at 10:17 AM](#)



[Akin Arikan](#) said...

You are so awesome for having done this series! (I just picked up the link now from Denis' top x list)

One question though please: in the last diagram, i.e the for large advertiser/publisher, are the arrows for #1 / #2 mixed up? Should they be pointing the other way?

[Reply December 14, 2008 at 02:01 PM](#)



[ian_d_thomas](#) said...

Akin,

Thanks for the compliment! You are right (and eagle-eyed, too) - those arrows are the wrong way round in that final diagram. I'll fix it when I get the chance.

Cheers,

Ian

[Reply January 03, 2009 at 12:24 PM](#)

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