Lies, Damned Lies...

The unpredictable world of online marketing & web analytics

August 18, 2008

Online Advertising Business 101, Part IV - Publishers

Welcome to the latest installment of my Online Advertising Business 101 series. So far we've looked at the overall value chain, at the mechanics of ad serving, and the role that networks play in creating the market. In this post, I'm going to look at the source of advertising inventory - publishers - in a bit more detail. There's a lot of complexity to monetizing a website (especially a large and popular one) effectively, and this side of the industry is often poorly understood.

What's a publisher?

A Publisher is the original source of ad inventory. By creating a web site or other digital media, and getting people to come and look at it, the publisher creates ad inventory by placing ads alongside the editorial content of their site.

The term 'publisher' is the best we have for this party in the value chain, but it's getting a little stretched now. For example, someone who creates an online productivity app (like Picnik) falls into this category, though you might not think of them as a publisher in the traditional sense. And Google Search falls into this group too, despite the fact that it creates no original content of its own. The only other term that's used for this kind of organization is Media Owner, but that's associated with traditional content businesses (things like the New York Times), and tends not to be used more broadly.

Publishers, like all businesses, are driven by profits. In terms of the advertising side of a publisher's business (bear in mind that some publishers generate subscription revenues from their content too), profit is driven by the following factors:

- The volume of ads that a publisher can sell alongside their content
- The price the ads can be sold at
- The cost of selling those ads

Each of these has an impact on the business decisions a publisher makes. If you don't understand all these drivers, you won't understand publishers. Let's look at these in turn:

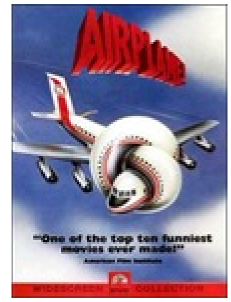
Volume: In an ideal publisher world, each word of editorial content would be accompanied by a hundred ads (you may have seen sites which look like they are close to this ideal). In the real world, there is a limit to the amount of advertising you can place around editorial before you start driving users away. Publishers are always looking to balance ad opportunities with user satisfaction.

Price: Generally speaking, the higher the price that a publisher can get for its ad inventory, the better. Maximizing this over time and across all the inventory that the publisher has is a huge challenge for publishers - an area known as yield management.

Cost: Publishers can incur various costs in selling ad inventory. One is the cost of sale - paying people to get on the phone to advertisers and agencies to sell the inventory, or paying a network to sell a block of inventory on the publisher's behalf. But another cost is opportunity cost. Any inventory that a publisher sells today can't, by definition, be sold again. So if a better offer for the same inventory comes in tomorrow, the difference between the two offers is the opportunity cost incurred.

I'm not going to spend any more time looking at the volume driver in this post - that really depends on the publisher's ability to promote their site and innovate on layout & ad formats to maximize monetization opportunities. What I'm going to look at instead is the relationship between price & cost - also known as the yield achieved by the ad inventory.

Why newspapers are like airlines



It may not be immediately obvious to you what newspapers and airlines have in common (except that, right now, both seem to be going out of business). But actually there are striking similarities between an airline's inventory of seats and the ad inventory sold by publishers/media companies:

- Their inventory is perishable - both seats and ad inventory slots become completely worthless after a particular moment in time
- There is a finite supply of inventory - neither airlines nor publishers can easily mint new inventory to capitalize on higher demand (unlike, say, an ice-cream manufacturer)
- It's possible to charge different customers different amounts for the same inventory (known as price discrimination)
- Both types of company have high fixed costs, meaning increasing revenue by (say) 10% can have a disproportion effect on profits

What these qualities mean is that publishers and airline must both maximize their revenues by selling as much of their inventory as they can at the highest average price possible.

In the 1980's, American Airlines led a transformation of the US airline industry when it introduced its "Ultimate Super Saver Fares" in 1985. AA's key insight was that people would be prepared to pay more for the same airline ticket when purchased at short notice - which enabled the airline to sell and advertise tickets at a much lower price for advance purchases. Thus was the business of yield management born.

Yield management

Now, we're not talking about the road sign type of yield here (besides, as a Brit, that sign should say "Give Way"). Yield management refers to the practice of maximizing the average price received for inventory through a number of techniques, amongst them price discrimination (charging different customers different prices for the same thing).

Yield management in the online ad business does differ a little from the business of airline seats, principally because a publisher does have some flexible control over the cost of sale; additionally, volume discounts play a significant part in the sale of online ad inventory. What this means is that online ad inventory yield management is really about maximizing gross profit rather than top-line revenue.

Packaging & pricing

The first yield management decision that a publisher makes is how it's going to package its inventory together for sale. The larger the publisher, and the more diverse the content of its site, the more complex this process is.

The approach that most publishers take is to divide their site into a number of "page groups" or "channels", where each channel contains a group of pages which are in the same content area. For example, MSN has a number of channels including Money, Autos and Finance. So if an auto advertiser wants to buy some ad inventory, the first place they look is the autos channel, knowing that their ads will appear in a contextually relevant setting (it's just like taking ads out in the Autos supplement of a newspaper - you know that the folk opening that supplement have some kind of interest in cars, which is a good start).

What makes this process more complex is that publishers increasingly want to divide their inventory up in multiple, overlapping ways, depending on other characteristics of the site or the audience, such as "regular readers", or "18-24 year-olds". The ad inventory in these audience-based page groups can potentially be sold for a higher price, but managing the total pool of available inventory becomes a lot tougher.

The more specific to an advertiser's needs that a publisher can make its inventory packages, the higher price those packages can be sold for; but there is a practical limit to how fine-grained a publisher can be - an inventory package that is "18-24 year old regular visitors looking at the auto channel" may end up being just too few impressions (or unique users) to be worth the advertiser's while buying (because every ad buy the advertiser or their agency makes has a fixed cost of administration).

Smaller and less-sophisticated publishers tend to fall back upon a default page group that is known as "Run of site" (ROS), or sometimes "Run of network" (RON). This basically means that the publisher can run the ad anywhere they haven't sold ads in a more specific page group. As a result, ROS/RON prices tend to be close to the bottom of the pile.

Price discrimination, volume discounts and bundling

Online ad sales (in fact, ad sales in general) is all about price discrimination. Every ad sales person in the world knows that the first thing you do when you call an advertiser prospect is to pitch an (unrealistically) high opening price (usually known as "rate card") and wait for the advertiser to negotiate down (often by as much as 60 - 70%). But exactly how far the price comes down for online ad inventory depends on a number of factors:

Time: If the advertiser wants to get the media booked well ahead of time, they'll have to pay a premium, because the salesperson still has a long window in which to sell this inventory, and also because the advertiser benefits from the "pick of the crop" of inventory, making it easier for them to achieve their campaign goals.

Volume: The more inventory an advertiser is prepared to buy, the better price (generally) they can get. Selling out big blocks of inventory reduces the risk for the publisher that some of its inventory will remain unsold - and unsold ad space, like empty airline seats, is what keeps publisher ad sales managers up at night.

Another way of thinking of this is in terms of opportunity cost. In the diagram below, on the left, the publisher makes one great deal for a relatively small amount of inventory at $10 CPM (cost per thousand ad impressions) but ends up offloading the rest of his inventory at $1 CPM; whereas on the right, the publisher makes a lower-price deal for more inventory, ad $5 CPM, and ends up making more money overall.

So a lot of what a publisher is concerned with is risk management, and many of the decisions publishers make about their business are as concerned with reducing risk as they are with maximizing return.

Frequency capping: This topic almost deserves a post of its own, but simply put, frequency capping is a technique used by advertisers to ensure that their ads are not seen over and over and over again by the same people. It's an essential element of online ad buying because otherwise a publisher could in theory sell a million ad impressions and deliver those impressions all to the same person (that would be a very loyal reader, to say the least). So advertisers usually specify a "frequency cap" of something like 4 or 5 ad impressions per unique user, to stop this happening.

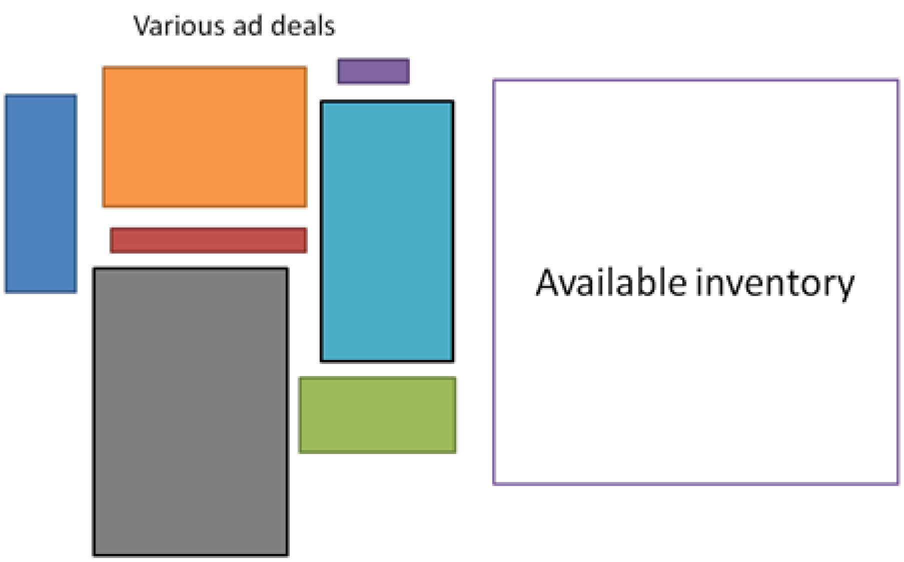
What this means for the publisher is that if they have some very active users consuming, say, 20 or 30 pages per site visit, it will be very hard to sell out all the ad inventory that these people will see because they'll be 'capped out' before they've stopped looking at the site. So publishers are prepared to sell inventory at a lower cost to advertisers who are prepared to accept a higher frequency cap.

Guaranteed vs 'discretionary' inventory: When a major advertiser is planning a big product launch, they're focused on ensuring that they get a certain amount of exposure, or reach - that is, that their message ends up in front of a particular number of people over a particular period. So publishers are called upon to guarantee that advertisers' ads will be shown a certain number of times, to a certain number of users.

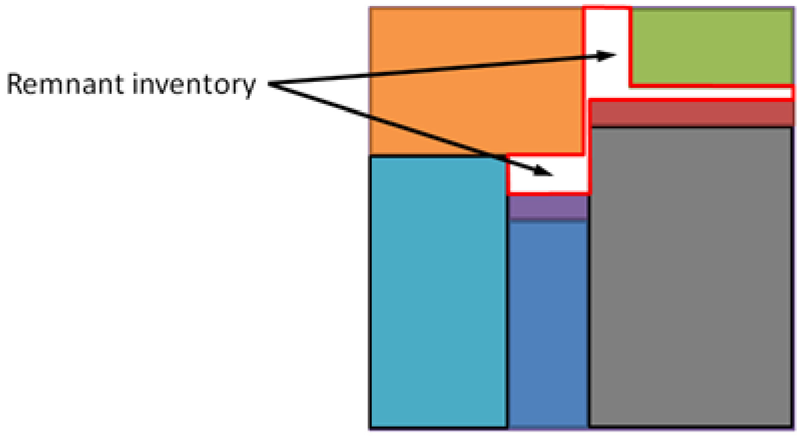
Because, in practice, a publisher doesn't know exactly how much site traffic or how many users they'll have visiting on a given day, it is absorbing some risk by doing this. So so-called 'guaranteed' inventory commands a premium compared to 'discretionary' inventory, which is often passed off to ad networks and sold on a auction/spot-price basis (see below).

Retargeting: As I've mentioned, a publisher can use their own data about their audience to create audience-focused ad groups and sell these for a higher price. But retargeting refers to the case where the advertiser brings some of their own data to the table, particularly data to identify users who've had some kind of interaction with the advertiser in the past. So the advertiser may say "I want to reach this list of 10,000 users [identified by a cookie] who came to my site this week but didn't buy anything". Because of the much higher value to the advertiser of reaching these users in particular, the publisher can sell that inventory at a higher price.

Remnant inventory & spot pricing
Selling online ad inventory is a bit like doing one of those puzzles where you have to fit a number of differently-sized pieces together to make a square; except the puzzle has to be done again and again, day after day, month after month:



On any given day, the ad deals that the sales team has sold get fitted into the 'box' of available inventory. Whatever space is left over is known as remnant inventory (outlined in red below):



(As a side note, sometimes the pre-sold inventory won't fit inside the box of available inventory, forcing the publisher to actually buy inventory from other sites and re-sell it to make up the shortfall. This is why some publishers are starting to look more and more like ad networks).

The remnant inventory is usually passed off to an ad network where it is either sold for a pre-determined 'floor price' (like, say, $.10 CPM), or it is auctioned off in real-time. In this sense the inventory is being sold in a similar fashion to spot-priced commodities, where the guaranteed deals are more like forward prices. Even when the remnant inventory is sold at auction, most publishers have a good idea of what the effective floor price for remnant inventory. Woe betide the ad salesperson who sells guaranteed inventory below this floor price.

What the ad network/remnant model means is that almost all inventory gets sold at some kind of price, though 'premium' publishers will only stoop so low to fill inventory spots. Even though an airline would make more money selling an empty first-class seat to London for $50 if it would otherwise be empty, if you've paid $8,000 for your seat and some stinky back-packer turns up next to you, you'll not be happy (even if the back-packer won't tell you how much he paid for his seat). Advertisers are the same - if Ford is paying top dollar for ads on the homepage of MSN, it doesn't expect to see cheapo debt consolidation ads in the same slots, even if MSN's salesfolk haven't managed to sell out all of that inventory.

That ad networks have supplied/soaked up low-value, 'filler' inventory has been an article of faith in the industry for the past 10 years, but this particular apple cart may be upset in the future as networks become more sophisticated in the targeting they're able to offer as they aggregate the behavior of users across the many sites in the network they visit and roll this data up to create targeting profiles.The upshot of this is that the floor price for a publisher is moving up, with some network prices starting to approach the lower end of the 'premium' deals that the sales team are striking. This is creating a demand from larger publishers for an 'all-up' inventory & revenue management system that can treat the publisher's available inventory as a single, homogenous block, rather than creating the arbitrary distinction of premium & remnant inventory.

So I think I have detained you long enough today. Please feel free to use the comments box to ask questions, add your own observations, or point out where I am grievously and embarrassingly wrong about something. I reserve the right to edit this post if I discover I have been a total dumb-ass about something.

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Comments

Joe said...

Geeze, thanks for posting this. Good read.

I found this article which is actually pretty relevant to the subject. You can check out the article on ad networks here. Personally, I think it's worth the read.

Thanks again for posting this.

Reply August 21, 2008 at 12:52 PM

g said...

Great series. Thanks!

Reply August 25, 2008 at 08:57 AM

theknopfler said...

Very informative, thanks!

Reply August 27, 2008 at 02:55 PM

vinay said...

AWESOME

How frequently is the new topics added? is there a way to get alerts on this.

Reply September 25, 2008 at 05:54 AM

irish said...

excellent article. I have become a recent fan of your work. I enjoyed the section on price discrimination.

Reply February 17, 2009 at 09:09 PM

Colleen said...

So happy I stumbled upon this!

Reply March 08, 2009 at 09:13 PM

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