

Introduction to Programmatic Advertising

This guide is meant as a quick introduction to the concept of programmatic advertising, as well as a brief overview of the methods involved.

Part 1: The Ad Marketplace

Like any marketplace, digital advertising revolves around one party purchasing a product from another party. In the case of advertising, the product for sale is ad space, such as commercials for TV shows and banner ads on websites. Agencies want to buy ad space for their clients because they want their advertisement to be seen by the publisher's audience, and publishers want to sell ad space so that they can make revenue from their content.

In a typical transaction, a publisher will hold an auction for a given ad space, and agencies will compete for the space by placing bids. The agency which places the highest bid will have their advertisement shown to the publisher's audience.

Part 2: Direct-sold Ads

Before the advent of the internet, ads were generally packaged with the content. In other words, everyone who watched a TV show or read a newspaper would be shown the same ads. Ad agencies make deals with publishers to sell ad slots for their content. For an example, consider the Super Bowl. CBS, which airs the Super Bowl as content, wants to sell the commercial ad space, so they list the available commercial slots for auction. A company such as Coca-Cola may want their ad to show before half-time. They bid on the ad slot they want, and if their offer is highest, then when the Super Bowl airs, everyone watching the Super Bowl on CBS will see the same Coca-Cola commercial.

This method of buying ads is called **direct-sold advertisement**. In this model the 'ad space' for sale includes many viewers.

Part 3: Programmatic Ads

On-demand streaming and digital TVs hooked up to the internet have opened up the doors for new ad technology. Digital broadcasting companies have massive servers which are able to automate and complete transactions in fractions of a second, as well as much more detailed demographic information about each viewer. This has led to a new model called **programmatic advertisement**.

Instead of one big ad auction, where the winning ad is shown to everyone, programmatic advertising auctions the ad space for each individual view. When a viewer pulls up a piece of

content, the publisher holds a very quick auction to determine which ad the publisher will show this particular viewer. This means that two people can access the same content from the same publisher and be shown completely different ads.

With programmatic ads, the 'ad space' being sold reflects only one viewer. That's not to say that direct-sold advertisement has gone away. Even purely online publishers still sometimes use direct-sold advertising, because it is a guaranteed sale ahead of time.

Part 4: Digital Advertising Infrastructure

Both publishers and ad agencies rely on software to manage advertisements. Publishers use **Supply-Side Platforms** (SSPs) to post ad space for sale, and ad agencies use **Demand-Side Platforms** (DSPs) to bid on and purchase ad space. They meet in the middle at an **ad exchange**, where the actual buying and selling takes place.

Ad agencies will program their DSPs to look for specific types of ad slots. For instance, their client may only wish to advertise on shows for children, or may be looking to show their product to 25-35 year old males. The DSP will then browse the ad exchange on the agency's behalf, looking to bid for commercial space which matches their specifications.

Whenever someone pulls up a show on a streaming service, that streaming service's SSP will go to the Ad Exchange and make a new auction, including information about the content and demographics of the viewer. DSPs will see this new auction and check if it matches their specifications. If it does, the DSP will place a bid on the auction. Whichever DSP bids the highest amount wins the auction, which lasts for only microseconds. Then the winner's ad is displayed to the viewer.

Part 5: Benefits of Programmatic Ads

There are several benefits to programmatic advertising. It saves time and effort, it allows for more targeted advertising, and it guarantees that ads are seen.

Programmatic ads are quicker and easier for both the agency and the publisher, as tasks like listing ad space, finding available ad space, and purchasing ad space can all be done quickly by the computer. This saves work on both sides, as the human labor involved in all of these tasks is eliminated.

The importance of the ability to target ads based on audience demographics cannot be understated. Many advertisers are selling products that only a fraction of the population would be interested in. Internet tracking technology has made it possible to develop detailed profiles on individual audience members, from categories like age and gender to more specific information like hobbies and interests. Companies do not want to waste any of their money trying to sell to people who have no use for or interest in their product.

Another benefit of programmatic advertising is that advertisers only need to pay for advertisements that actually get seen. Purchasing ad space directly can be risky as it relies on the content the ad is paired with to actually be popular. Advertisers may pay a high price for a direct-sold commercial slot on a new TV show expecting millions of viewers, but if only a few thousand people tune in, the advertisers get a very low ROI. This is not a problem with programmatic advertising as each individual view can be sold separately. Under a programmatic model, if only a few thousand people watch the show, then only a few thousand ad spaces were sold in the first place.

Conclusion

While direct-sold advertising still has its place in the advertising market, programmatic advertising has become increasingly popular as the technology has improved. Programmatic ads reduce the need for human labor and allow ads to be more targeted towards a desired audience.