

Chairman Graham, Ranking Member Feinstein, and distinguished members of the committee, thank you for the opportunity to appear before you today to discuss privacy and competition policy in the digital advertising ecosystem.

I have spent the bulk of my professional career thinking about the impact of advertising on consumers and the internet. As one of the early pioneers of digital advertising technology, I helped build one company—Right Media—that was acquired by Yahoo! in 2007 and co-founded another, AppNexus, that was acquired last year by AT&T. Though I'm speaking today in my capacity as a private citizen, my point of view is informed by 15 years of building advertising technology in partnership with the world's largest digital publishers and marketers.

I am here today because I believe the lack of competition in the internet sector is harming consumers and preventing innovation. In addition, I believe that consumers need rights to protect their personal data. As I will discuss more below, these two issues overlap: it is the lack of consumer data protections and the illusion that advertising comes at no cost to consumers that has allowed a few companies to become internet monopolies.

Over the past twenty-five years, the internet has transformed our economy, our culture, even our politics. As with prior technological revolutions like the railroad, the telegraph, and the telephone, it has collapsed space and time and drawn people together in closer connection with each other—often in ways that improve our shared experience. Like these earlier innovations, the internet has also created opportunities for entrepreneurs to build massive, innovative companies that gobble up competitors and push the boundaries of our laws.

Unlike the railroad, the telegraph, and the telephone, the internet comes at little or no direct cost to consumers. Brands invest billions of dollars to advertise with internet companies; these internet companies, in turn, make their content free to the public. For the cost of viewing ads, people like you and me get to enjoy social media, film and video, games, news, and information. In this sense, advertising is the economic network that enables the internet as we know it.

This economic network is unique because it has three parties: the consumer, the content producer, and the advertiser. The content seems free to the consumer because the advertiser pays for it, but of course there is no free lunch: the cost to the consumer is her attention and the personal data that the content producer gets through the interaction. For instance, when the consumer checks the weather on her phone, the weather app knows her precise GPS location, and will use that to sell ads to advertisers with stores nearby. In addition, the weather app may sell her data to other companies, or build profiles to determine where she likes to shop, to travel, to sleep, to work.

In a competitive landscape, if the consumer perceives this cost to be too high, she will switch to a different service. For instance, a consumer that doesn't like how this weather app uses her data could switch to a different one. That assumes three things: that she knows how her data is being used, that she can take her data with her, and that there is enough competition that there is actually another option. Today each of these assumptions are false. We do not know how our data is being used. We cannot take our data with us. And in far too many cases, we do not have viable competitive options.

Transparency: What do you know about me

As an informed consumer, I want to know how companies use my data. Even with my computer science degree and 15 years of ad tech

experience, it is hopeless to try to follow my data around the internet. I don't read 15 pages of privacy policy legalese before I visit a web site. I often allow third-party cookies because many sites break if I don't. I deleted my Facebook account, but I use WhatsApp and Instagram. I use Waze for driving directions, so Google knows exactly where I live. Technology has so pervaded our everyday lives that it's almost impossible to know what data is being collected.

Once that data is collected, it is often shared to third parties without my knowledge or consent. Aside from being creepy, it's dangerous. Any of these third parties that has a security breach will expose my information. If I ask the original data collector to delete my information, my data is still out there in the hands of everyone they shared it with. Our leaky data ecosystem is far too easy to exploit.

Portability: I can take it with me

As the Electronic Frontier Foundation says, "*Data portability* allows a user to take their data and move it to a different platform. If it were more feasible for users to take their data and move elsewhere, Facebook would need to compete on the strength of its product rather than on the difficulty of starting over. And if the platform were more interoperable, smaller companies could work with the infrastructure Facebook has already created to build innovative new experiences and open up new markets."

This data portability should apply to all internet services. For instance, if my search history on Google enables them to deliver a more personalized search experience, I should be able to transfer that search history to Bing so that I get an equivalent experience there. Similarly, I should be able to transfer my order history at Amazon to Walmart so that they can offer me the same level of personalization – but only if I want them to.

Implementation: A bill of rights and a privacy agency

We need a data bill of rights that establishes some first principles for what consumers should expect from companies that have access to their data. Some basic principles that we might start with:

- I want to know any time that someone collects data about me.
- I want to know where that data resides and that it is properly protected from cybersecurity attacks.
- I want to give explicit permission before that data is shared with another service, even if that service happens to have the same corporate parent
- I want the ability to correct or remove my data.
- I want the ability to take all of my data with me, in a usable form, and transfer it to another company or service.

These seem like fundamental rights, but given the complexity and rapid change in the internet space, how can the government ensure that they are enforced? Regulation could inadvertently put more power in the control of a few companies, or create a barrier to entry for larger companies that can afford the compliance burden. Leaving data protection to the states would create such an unfair compliance burden on small businesses.

David Siegel [recently proposed](#) a way to protect consumers without the risks of counterproductive regulation: “To protect the public interest and their own businesses, these companies should set up a robust self-regulatory organization along the lines of the Financial Industry Regulatory Authority (FINRA), an SRO that derives its authority from the Securities and Exchange Commission. Thanks to its independence from bureaucratic government agencies, FINRA is effective—and relatively nimble—at policing securities firms with sensible rules. Given the extraordinarily rapid pace of technological change, it is unrealistic to expect governments to devise, update, and enforce effective rules by themselves. Such an approach can hinder innovation and produce marketplace advantages for the largest companies. And in the tech world, everything from consumer

behavior to hardware and software capabilities evolves too quickly for static statutes to remain meaningful for long.”

My story: Competing with the Google super-monopoly

As an entrepreneur, I competed directly with Google in one of their many business areas, that of ad technology. I know this is a very complex ecosystem, so I will focus on one particular example that clearly shows the risks of uncontrolled monopoly power.

In 2008, I invented a technology called real-time bidding which turned every ad on the internet into a real-time auction. Advertisers could use our technology to choose which ads to bid on, driving up the price for content producers. This invention created a virtuous cycle where advertisers saw better results from advertising and publishers increased their ad revenue, driving rapid adoption of “programmatic advertising”. Over the next few years, AppNexus doubled in size every year, growing from 18 employees to over 600 and was valued at over \$1 billion dollars.

Google acquired DoubleClick, the ad technology market leader, in 2007. With the rise of programmatic advertising, its dominance was at risk, so Google spent over \$1 billion to acquire a series of small companies (Invite Media, AdMeld, Teracent, Spider.io). As competition heated up, AppNexus signed a major strategic deal with WPP, the largest advertising agency in the world, and spearheaded widespread adoption of header bidding, a new technology that undermined Google’s near-monopoly on publisher advertising technology.

Google’s response to the threat from AppNexus was that of a classic monopolist. They announced that YouTube would no longer allow third-party advertising technology. This was a devastating move for AppNexus and other independent ad technology companies. YouTube was (and is) the largest ad-supported video publisher,

with more than 50% market share in most major markets. While Google claimed this decision was to improve advertiser experience, the next few years of advertiser boycotts clearly demonstrate that advertiser experience was significantly worse after this decision.

Over the next few months, Google's ad technology team went to each of our clients and told them that, regardless of how much they liked working with AppNexus, they would have to also use Google's ad technology products to continue buying YouTube. This is the definition of bundling, and we had no recourse. Even WPP, our largest customer and largest investors, had no choice but to start using Google's technology. AppNexus growth slowed, and we were forced to lay off 100 employees in 2016.

This is just one example of many where Google used its unfair market heft to attack AppNexus and other competitors in the internet advertising space. It's a long list: Google search data is only available in their own ad platform; they threaten publishers that they will stop running lucrative AdSense contextual ads if they switch ad platforms; they restrict integrations with their analytics and measurement tools; they use their consumer products to claim "first party" status in privacy discussions. I could go on. But the point I'm trying to make, just in this one relatively obscure part of the Google empire, is that Google acts to protect its own interests, not those of its customers or of society at large.

Eliminate the Advertising Anti-Trust Exemption

Over the past decade, Facebook and Google have successfully completed hundreds of acquisitions without any meaningful anti-trust implications, creating super-monopolies reminiscent of AT&T and Standard Oil in their respective heydays. The reason that these acquisitions have gone uncontested is that modern anti-trust enforcement uses consumer prices as the sole measure of consumer welfare to evaluate a proposed merger. Since much of the internet is

ad-supported, the direct monetary cost to the consumer is zero. In effect, we have created an advertising anti-trust exemption that has allowed ad-supported companies to buy whoever they want.

We have to close this loophole in anti-trust practice and reintroduce competition in the internet sector. I am not an anti-trust expert, but I can suggest two angles to pursue.

First, we need to remember the “no free lunch” that’s built into the advertising economic network. Consumers pay for ad-supported content with their attention and data. If a merger or combination will obfuscate this trade, it should not be allowed. For instance, I think Facebook users understand that the information on their profile will be used for advertising purposes *on Facebook*. When Facebook acquired Instagram, they gained the ability to take this Facebook profile data and use it to monetize Instagram. I think this is confusing for users (to quote my daughter when I was explaining this to her, “Facebook owns Instagram!?!?!?”)

Perhaps the answer here is, as I suggested above, to have all data be siloed in its respective service and treat intra-company transfers at arm’s length. Alternatively, we could create the concept of common carriage, and require Facebook to offer its data to any photo-sharing app with the same access and at the same price as it does to Instagram. You might say that’s a privacy issue. Yet if Facebook can update its privacy policy to add Instagram, it can update its policy to add Snapchat. There is no magic to an acquisition that somehow makes it safer to share data between two companies once one acquires the other.

Second, we need to ask regulators to look at the full value chain when they consider whether a combination is anti-competitive. On first look, perhaps YouTube seemed like an innocuous addition to the Google empire since it’s free and doesn’t directly overlap search.

This presumption that the internet is made up of disconnected markets is clearly false. We need to assume that internet giants, like any other big companies, will use their assets to maximize profit and strategic value. Data is an incredibly valuable asset. Free services that capture data are powerful assets in the information economy. Thus, it's hard to imagine how using consumer price as the sole determinant of consumer welfare makes any sense for internet companies. Free isn't an excuse to be anti-competitive.

Conclusion

As an entrepreneur, I am hesitant to ask the government to split up Facebook or Google. These are incredible companies that have done much good for consumers, employees, and communities. At the same time, we must ask ourselves whether having the internet concentrated in the hands of a few companies is good for America.

I propose three actions to ensure that consumers have choice, and thus agency, in the internet economy:

1. Create a consumer bill of data rights that lays out first principles to ensure transparency, control, and portability of data.
2. Create a regulatory entity to enforce these principles as the internet continues to evolve.
3. Close the anti-trust advertising exception and either break up the internet giants or force them to treat their component parts at arms-length.

Thank you very much for taking these issues seriously. I fully believe that with a few thoughtful actions, we can create a better internet.