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The Cloud Industry Needs Aereo to Win. But Consumers Need Something Better.

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The best way to think about Aereo, the company at the center of this week's Supreme Court battle over the future of computing, is as an example of legal performance art. Aereo is based entirely on a legalistic leap of faith: If it's legal to set up an antenna and record a TV show at your own house, which it is, shouldn't it also be legal to rent an antenna and server space at a big data center, and then stream the show over the Internet to your computer, tablet or set-top box?

It's a clever argument, one that highlights the extreme lengths that tech companies go to in order to avoid copyright restrictions. The argument is designed to show off the similarities between Aereo and more traditional cloud services like Dropbox — services that the Supreme Court would have to strive mightily to separate out of any ruling against Aereo.

But for all its cleverness, Aereo is also a gimmick. Aereo is a for-pay, middleman service whose sole function is to let you stream TV shows that are already freely available over the air. For consumers, the best outcome of this case is for Aereo to win, and then scare broadcasters into streaming their content directly to users, either for free or for a lower price than Aereo charges.

Aereo is based on a loophole. To offer TV shows over the Internet, most streaming services like Netflix or Hulu pay licensing fees to studios. But licensing is expensive and restrictive; some of the best content, like the Olympics or the Super Bowl, isn't even available for licensing.

In most parts of the country, though, broadcast networks — ABC, NBC, CBS, FOX, PBS and others — send their signals over the air, free to anyone who has an antenna. Aereo saw these over-the-air signals as an opportunity. It created a data center that houses thousands of antennas, each about the size of a dime. The company assigns a single antenna to a single subscriber. When you sign up for Aereo — which is available in more than a dozen cities, including New York, starting at \$8 a month — the company rents you an antenna and assigns some server space to you.

If you have Aereo, then, you can watch the Super Bowl or the Olympics on your computer or your phone. Because it records each show for each customer separately, the firm maintains that it is simply performing a service in a data center that a customer is allowed to do anyway.

It's a clever legal maneuver precisely because it highlights the similarities between Aereo and the rest of the cloud-computing industry. In briefs they filed with the Supreme Court, many tech companies argued that what Aereo does isn't very different from what Dropbox and other cloud companies do: It creates space on a server for each customer to store content. During oral arguments at the court this week, Aereo pressed this point. "The cloud computing industry is freaked out about this case," David C. Frederick, Aereo's lawyer, said, arguing that a ruling against Aereo would expose cloud companies to "potentially ruinous liability."

This seems logical. After all, if the court rules that you can't store on a server a TV show that you, alone, have recorded and are allowed to access, then what if you rip your CDs and store the files on Dropbox — wouldn't that violate the same rule? The justices appeared to be wrestling with this quandary. "What disturbs me on the other side is I don't understand what the decision for you or against you when I write it is going to do to all kinds of other technologies," Justice Stephen G. Breyer said.

But if Aereo's win is important for the cloud industry, the service itself is more dubious. The technology at the heart of Aereo is fantastically inefficient, and I can't see how it can be a net gain for consumers in the long run.

For one thing, Aereo can't benefit from one of the primary factors that makes the Internet such an amazing system for distributing data — the idea that all digital copies are identical. Most cloud companies take advantage of this fact. For instance, Netflix

does not need to store a distinct copy of “Breaking Bad” for each of its subscribers; if it did, its server costs would be unsustainable. Instead, because every digital copy is the same, Netflix can keep just a handful of copies of “Breaking Bad” in a few data centers around the country. Then it serves up one copy to millions of customers on demand.

Dropbox, too, benefits from the idea that digital data is fungible. If you try to store a huge file that has already been uploaded by another user, Dropbox detects the duplicate file and skips your upload. It then simply makes a note that your file is the same as one it already has. This saves Dropbox space on its servers, and it saves you uploading time.

But to sustain the legal gimmick that it is creating separate copies of each show for each of its users, Aereo can’t benefit from the huge efficiency gains afforded by the Internet. Instead, if thousands of Aereo users choose to record “Modern Family,” the company has to keep thousands of distinct — though technically identical — copies.

The company argues that its system is still more efficient than the current regime, in which we all record a separate copy on separate TVs in all of our houses, copies that can’t easily be streamed from device to device. That may be true, but it’s such a paltry gain that I’m not sure we should be celebrating it.

I’m happy that Aereo has been willing to spend its vast resources to make an elaborate legal point. Its win would be crucial for much of the tech industry.

But there’s a better way for consumers to get cloud access to TV shows than anything like Aereo: Networks could stream their content online for fees far lower than what Aereo charges. And they ought to.

Networks would be able to provide this service more efficiently; because they own the content, they wouldn’t need to keep millions of different copies of identical shows. And they would be able to pursue novel business models with the content. For instance, unlike Aereo, they could sell ads on the streams, thus helping to lower subscriber fees.

But why would TV networks do this? Wouldn’t streaming their channels throw their current businesses into disarray? Probably. But if Aereo wins and begins to

thrive, networks may not have much of a choice.

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