

# SONOS

Senator Thom Tillis

Question for the Record to Eddie Lazarus

Chief Legal Officer, Sonos

**1. One very effective strategy that big tech companies and others use to gain and maintain their monopoly power is through the efficient infringement of the patents of innovative startups and smaller competitors. We have seen how this works through infringement cases brought by companies like Sonos and the cyber security company Centripetal. In each case, a cutting edge startup had to spend millions of dollars and many years to confront an entrenched incumbent that had simply taken their IP and used the current system of endless challenges at the PTO and legal maneuvers to slowly grind them down. This pattern has become standard operating procedure for big tech companies to kill off competition that should be coming from innovative new startups. Are there any changes to current law or additional tools that we can give innovative startups to better protect their patents and break this cycle of predatory IP infringement?**

Sonos very much appreciates your recognition of a real and innovation-stifling problem that lies at the intersection of intellectual property (IP) and competition policy. The root cause of “efficient” infringement (or predatory infringement, as Sonos prefers to call it) is that the remedies available under current patent law doctrines are inadequate to deter large companies from massively infringing on the intellectual property of smaller competitors and daring them to sue. Regrettably, the big companies know that infringement pays off in the aggregate because (i) many companies don’t have the financial resources to litigate for years on end and therefore either settle prematurely or *don’t sue at all*; and (ii) when lawsuits *are* successful the damages awarded are rarely more than what a commercially reasonable license would be in the first place. Especially where the rewards from network effects or overall gains in market share are high, the economically *efficient* thing for large companies to do is to infringe – because, under current law, the gains from infringement outweigh the risk-adjusted consequences.

The only way to solve this problem is to change the calculation by making either or both (i) litigation faster and less expensive; and (ii) increasing the costs of infringement. The first approach is very difficult, but there are several ways to address the second. We detail them below.

## **Adjust the “Reasonable Royalty” calculation**

Currently damages in a patent case are supposed to be “in no event less than a reasonable royalty” – i.e. what a willing buyer would pay a willing seller for a license to the patents. And, in

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the vast majority of patent cases, that is how the damages are calculated. But this approach misses a fundamental issue insofar as it *assumes* that the patent licensor is willing. There is no reason to make this assumption, and doing so gives the infringer an enormous, and unwarranted advantage. The reality is that in many situations companies (like Sonos) would prefer *not* to license their inventions to competitors and instead enjoy the lawfully granted exclusionary rights for the patented technology which form the very basis of the *quid pro quo* of the patent system. It is clear that calculating damages based on the idea that the infringer is *willing* to license benefits the accused infringer in the form of lower damages numbers. But it is not clear that this is economically sensible, much less equitable. The reasonable royalty framework is effectively a quasi-compulsory licensing scheme.

## **Make Lost Profits more accessible**

For a plaintiff to get lost profits in a patent case, it must prove that the patented feature is the primary reason that customers purchase the product. Put differently, under current law, it is not sufficient to show that the patented feature is a *significant* reason that customers purchase the product, or even that customers would not purchase the product without the patented feature. Instead, a plaintiff must affirmatively show that the specific feature is *why* customers purchased a particular product. The justification for this rule is the idea that, if the patented feature did not cause the lost sale, then the act of infringement did not result in lost profits to the patent owner. Stated this way, the rule is superficially appealing. But the rule is the result of an economically problematic oversimplification. The reality is that consumers vary in their preferences and the way they evaluate products is complex. Imagine, for example, that a patented feature increases sales of a particular device by 5%. Did the feature “cause” those sales? Even if you query customers right after a feature is introduced, they will tell you that they purchased the product because of the *constellation* of features. The addition of the patented feature resulted in some additional sales on the margin – but you aren’t going to find consumers who tell you that it is *why* they purchased the products. Instead, consumers will tell you that it contributed to their purchasing decision. But under the law, that simply isn’t good enough to get *any* lost profits. Put differently, the law assumes that the relationship between a patented feature and sales is binary – i.e. either the feature *caused* the sales or it didn’t – while the reality is that patented features almost always *contribute* to sales. Again, there is no reason for the law to simply assume something we know to be wrong about consumer behavior and how they evaluate products, and then bake that incorrect assumption into the requirements for showing lost profits.

## **Adjust how exemplary damages are evaluated**

The legal standard for evaluating whether infringing conduct is willful and whether enhanced damages should be awarded has been in flux for some time. While the Federal Circuit recently

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clarified that willful infringement requires a showing that the infringer's conduct was deliberate and intentional, that is currently not enough to warrant enhanced damages. Instead, the Federal Circuit further requires conduct that is wanton, malicious, or in bad-faith. This standard is too high. In reality, the difficulty plaintiffs have in obtaining exemplary damages (coupled with the difficulty in showing lost profits) means that, even when they lose, defendants generally don't have to pay more than what a willing seller would charge a willing buyer. Put differently, even after a plaintiff drags a defendant all the way through litigation (and appeal, and Inter Partes Review) and wins, the defendant only has to pay the amount he or she would have paid **if the patent owner were willing to negotiate a license**. To fix this, Congress could make it clear that enhanced damages shall be awarded if the defendant's conduct was *willful* – i.e. if it was deliberate and intentional. That's what "willful" means – it doesn't mean malicious.

**Rebalance Injunction Law:** Prior to the Supreme Court decision *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006) the law of injunctions in patent cases favored patent holders. *eBay* introduced a more traditional equitable approach to injunctions in patent cases, including a showing of irreparable harm – i.e. a showing that the injunction was necessary to prevent a harm that could not otherwise be compensated with money. Sonos has no quarrel with many aspects of *eBay* and particularly supports its distinction between practicing and non-practicing entities, but we think the application of *eBay* has overtitled the scales against injunctive relief. To take one example, since *eBay*, the Federal Circuit has interpreted the law in a way that makes it virtually impossible to get an injunction where the accused feature is included in a multi-feature product. More specifically, in order to get an injunction a plaintiff now must show that the patented feature is the reason that customers buy the product. The theory behind this rule is similar to the lost profits rule – i.e. it is based on the idea that if the patented feature did not cause the sale, then the sale would still have taken place even without the act of infringement and thus the act of infringement did not cause the plaintiffs' lost market share.

This rule works well enough in cases where, for example, the patent is on a drug – because the drug's efficacy is *the reason* that consumers buy the product. So in drug cases between competitors, injunctions are generally available. But the causality standard is almost impossible to meet when it comes to a feature-rich product *because* (again) consumers don't buy a feature-rich technology product because of a single feature, no matter how inventive or novel it may be. Instead, consumers almost universally report that they buy products because of the *constellation* of features included relative to the price of the product. But, again, that does not mean that the patented feature did not contribute to the sales, or that the inclusion of the patented feature is not responsible for *some portion* of the lost market share. The law, as currently constituted, however, does not give any weight to that causality and instead treats the

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question as a binary one (in which a feature either fully causes the infringing sales and the irreparable harm or has no effect, causes no irreparable harm, and cannot be subject to an injunction). This makes no sense to us.

In our view, the solution is to focus on enjoining the infringement rather than the sale of the accused multi-feature product. Imagine, for example, that the law was modified so that (outside of the FRAND context), where plaintiffs can show that they are competitors and are successful they “shall” be entitled to an injunction against infringement. This would solve the problem from the plaintiff perspective, because it would get rid of the forward-looking compulsory licensing that patent law has created. But it would also be equitable to defendants, because it (i) would not create undue leverage for non-practicing entities and (ii) would narrow the scope of the injunction fight to the portion of the product that infringes. And it would be economically efficient because it would give the defendants the choice to drop the infringing feature, modify it so it wasn’t infringing or engage in mutually acceptable licensing discussions. This would be so much more efficient than (as we currently do) assuming that plaintiffs will license for the purpose of setting the royalty rate, and then preventing them from getting any injunctions at all based on a binary view of consumer behavior and purchasing decisions that we know is wrong.

## **Allow Context To Matter**

The Big Tech companies are among the largest patent holders in the world and they use their portfolios not to challenge each other but to bludgeon smaller companies that dare to challenge them. Sonos’ experience is illustrative. Sonos pioneered the field of wireless multi-room home audio for years before Google contemplated entering the market, which it did with a series of products that currently infringe upward of 200 Sonos patents. After years of trying to get Google to agree to a fair license, we filed three lawsuits in the U.S. — an action involving five patents at the International Trade Commission, a companion case in federal court, and a second federal case involving a completely different set of four patents. Thus far, courts have adjudicated infringement with respect to seven Sonos patents. They have found Google to be infringing six of the seven. Google responded by filing five lawsuits of its own — in the U.S., Canada, the Netherlands, France, and Germany. I won’t belabor all the ways Google is abusing the international patent system by forum shopping the same patents all over the world. Suffice it for these purposes to say that Sonos has now won every case that has been adjudicated as well as partial victories in the cases where some issues are still pending. But Google has an inexhaustible supply of patents and so, having struck out so far, they have now filed not one but two cases at the International Trade Commission, involving another seven patents.

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The problem is that we can't tell a jury about Google's course of conduct. As interpreted by most courts, the evidence code prevents us from telling a jury (for example) that Google has sued us on six versions of the same patent and that five previous international courts have found that patent invalid or not infringed.

Context matters. In particular, it matters because, if companies knew that their overall behavior would be judged they would behave differently. But because courts generally interpret the evidence code so as to prevent plaintiffs from putting the conduct in front of the jury, there is no accountability. Again, the fix could be relatively straight forward: adjust the law so that facts surrounding how a defendant has dealt with a patent holder *in toto* can be considered by the jury in deciding the question of willfulness.

Allowing context to matter would also do quite a lot to tamp down the kind of retaliation that Sonos has received for daring to assert its rights. There can be no serious question that Google's grossly disproportionate response, which has and will continue to impose huge costs on Sonos, is designed both to punish Sonos for successfully challenging Google's misappropriation of Sonos's IP and as retaliation for Sonos taking a lead role before Congress in advocating for antitrust reform. To our knowledge, Google has never brought a case before the ITC; now it has brought two against Sonos. Especially if we are going to require Sonos to prove that Google's conduct is "deliberate" and "intentional" we should allow Sonos to tell the jury the facts about Google's conduct. At minimum, Sonos must be able to tell the judge about Google's conduct when the judge decides whether to enhance damages.

Sonos knows that this Committee does not take sides in pending litigation; nor should it. But in addition to considering the intellectual property reforms outlined above, Congress could at least level the playing field a bit by passing the moderate and sensible reforms contained in S.2992, the American Innovation and Choice Online Act. Sonos wants nothing more than the chance to compete — our innovations against those of others — but that means having a fair chance to protect our innovations and not being subject to all sorts of predatory conduct by the dominant platforms that squelches smaller rivals.

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**Senator Blackburn**  
**Questions for the Record to Eddie Lazarus**  
**Chief Legal Officer, Sonos**

- 1. Recently, Sonos has filed several patent infringement lawsuits against Google, alleging that Google is infringing wireless audio patents across its line of Nest and Chromecast products. What kind of technology does your company allege Google has stolen?**

Sonos pioneered the field of multi-room home audio — the ability to play audio content throughout your home wirelessly — more than a decade before Google entered the market that Sonos had largely defined. Since Google started selling its devices (the Home, Home Mini, Home Max, and Nest line of smart speakers) it has added one functionality after another that Sonos invented and patented. Sonos has provided Google with claim charts showing Google's use of roughly 100 Sonos patents covering a wide range of both foundational inventions that enable multi-room wireless home audio technology and some of the most popular features of Sonos' services. The patents we have asserted in litigation cover a cross-section of these inventions and include patents directed to how smart speakers are discovered and joined to a network; how wireless smart speakers are synchronized; how speakers can be flexibly grouped and invoked for playback; the equalization of speakers; the way in which music is queued and stored for playback; and the ability to seamless transition from playing music on a portable device (like a phone) to your speaker system as you walk in the door of your house.

- 2. Could you estimate Sonos' loss in revenue resulting from this alleged infringement and what effect did this have on Sonos' market share?**

We have not attempted to calculate a specific dollar loss attributable to all of Google's infringement, but Sonos' loss of market share has been enormous. Back in 2015, Sonos owned significant market share over competitors like Bose – which was a direct result of the fact that Sonos **created** the wireless, multi-room smart speaker category in the first instance. Amazon entered the market in 2016 with the Amazon Echo, followed quickly by Google with the Google Home in 2017. The entry of these two dominant firms had profound negative effects upon Sonos market share.

Not all of the decline in Sonos' market share is due to Google's infringement. But the fact that Google has taken so many of Sonos' inventions and then packaged them in speakers which Google has sold at cost, or sold at a loss, has been a major contributor to Sonos' declining market share. Put differently, in our view Google has decided that it does not care about

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margins in the smart speaker business. Instead, Google views smart speakers and their capacity to recognize voice commands as a gateway to its dominant position in search, and as a way to monopolize the interface to “smart” appliances in the smart home. Google wants to gain as much control over this interface as it can. And to do that, it has copied Sonos’ patented technology and sold that technology at a loss in order to gain that market share. And it has been enormously successful in doing so.

### **3. Has Amazon engaged in similar conduct or infringed on Sonos’ patented technology?**

Sonos believes that Amazon is also infringing many Sonos patents and has provided Amazon with claim charts to substantiate that view. Amazon has also, like Google, been fighting a battle for control of consumer interactions with the smart home. Its strategy has been similar to Google’s insofar as it has taken Sonos’ inventions and put them into lower cost speakers which Amazon has priced with a view towards gaining market share rather than making a profit.

### **4. What is Sonos’ primary source of revenue, and what percentage of the company’s revenue comes from speaker sales?**

Sonos’ revenue derives almost exclusively from selling speakers, soundbars, and audio components such as amplifiers. In our Fiscal Year 2021, Sonos’s global revenue was \$1,716,744,000, of which \$890,837,000 was in the United States. Speakers represented 80% of Sonos’s revenue and system components (including amplifiers) represent an additional 19%. Both Sonos speakers and system components utilize the patents under dispute with Google - Sonos works as a system. Our amplifiers work seamlessly with our smart speakers, and vice versa, and that is one of the main benefits of Sonos. It is an excellent and easy customer experience.

### **5. Both Google and Amazon now produce smart, multi-room speakers to compete with Sonos. Often, Google and Amazon’s products appear to be cheaper and both companies are suspected of predatory pricing enabled by cross-subsidizing their speaker business. What is the profit margin on Sonos’ speakers?**

Sonos targets a “gross margin” for its products, meaning net sales minus the costs to produce the goods at 45-47%. Sonos’ EBITDA margin, a non-GAAP measure of profitability, was 11.3% in our most recent fiscal quarter (Q3 FY22). We agree with your observation that Google and Amazon engage in potentially predatory pricing behavior through the cross-subsidization of their speaker products, which are sometimes sold below cost and even

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given away for free in order to build out the moats protecting their lucrative monopolies in related markets.

## **6. Has Sonos had to lower prices to compete with comparable products produced by Google and Amazon?**

Sonos cannot compete with Google and Amazon on price because we do not have dominant businesses from which to cross-subsidize our speaker sales and we do not use the data from our smart speakers, as Google and Amazon do, to create value in some other dominant business, such as search, search advertising, or e-commerce.

## **7. Other than the speaker hardware and the proprietary software used to control the speakers, does Sonos have other products or services such as a music streaming service or AI assistant?**

Sonos operates as a platform providing consumers the choice to listen to more than 100 music services. Sonos has a nascent streaming service called Sonos Radio that is available on Sonos products. Sonos Radio is a free service supported by advertising and Sonos Radio HD is a subscription offering. Radio represents a small fraction of our revenue and is still a new offering. We have a small number of owned and operated channels in which we set the programming on Sonos Radio, for example, featuring playlists by notable musical artists.

Sonos does offer a voice assistant on its voice-enabled products called Sonos Voice Control. Sonos Voice Control was designed to be the simplest way to control your music and your Sonos system, putting speed, accuracy and privacy on equal footing. Sonos Voice Control works just like the Sonos app, offering complete command of your Sonos system using only your voice. Control your music and speakers in any room, easily move music around your home, save and like your favorite songs to your personal music library and more.

Lastly, Sonos Voice Control is built with privacy in mind. Sonos Voice Control processes your voice and understands your requests entirely on the speaker. No audio or transcript is sent to the cloud, stored, listened to or read by anyone, so all your conversations will remain private. Sonos Voice Control, however, is not an ask-anything voice assistant like Amazon Alexa or Google Assistant. It is limited to music.

## **8. To create user preference for a certain products, Google and Amazon are incentivized to create limited interoperability for devices outside of their respective smart home ecosystems centered around their AI assistants. On some levels, both Google and Amazon are partners through their music streaming**

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## **services and AI assistants. Did this relationship change once both companies entered the smart speaker market?**

Google limits interoperability in two important ways.

First, as also discussed in our answer to Question 9, Google contractually limits the interoperability of Google Assistant on Sonos devices. Sonos has developed a consumer-friendly technology that would allow multiple voice assistants to exist “concurrently” on our speakers — meaning that a user may activate and seamlessly move back and forth between whichever voice assistant that user prefers simply by uttering the relevant “wake word,” such as “Hey Google” or “Hey Alexa” or “Hey Sonos.” Google contractually prohibits Sonos from making Google Voice available concurrently with Alexa on our products. This prohibition forces users to select a “default” voice assistant in the Sonos app rather than simply being able to activate the voice assistant of choice through an easy voice command. By limiting Sonos in this way, it deprives Sonos of the ability to offer the unique consumer benefit it invented.

Second, Google is planning to introduce technical requirements to Google Assistant that will make it harder to interface with Sonos products. The specific details of this development are confidential and thus are not contained in this response. However, Sonos would be happy to provide more information about this development in a format that would preserve its confidentiality.

Sonos continues to offer its customers both YouTube Music (Google) and Amazon Music as choices on its platform.

## **9. Has either Amazon or Google leveraged their partnership with Sonos to create preference for one company’s service over others?**

Yes. Sonos has developed a consumer-friendly technology that would allow multiple voice assistants to exist “concurrently” on our speakers — meaning that a user could activate and move seamlessly between whichever voice assistant that user prefers simply by uttering the relevant “wake word,” such as “Hey Google” or “Hey Alexa” or “Hey Sonos.” Google contractually prohibits Sonos from making Google Voice available concurrently with Alexa on our products. This prohibition forces users to select a “default” voice assistant in the Sonos app. Sonos believes that Google forces this default selection because it believes that more Sonos users will default to Google Assistant (prioritizing search) than Alexa (prioritizing e-commerce). And because defaults in an app are “sticky” more users will end up going into

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the Google ecosystem than into the Amazon ecosystem than would be the case in a concurrent arrangement.

**10. Does Sonos collect any data on user music preferences or feedback through its smart speakers, and does any of this data come through the use of Google or Amazon's voice activated AI assistants?**

Sonos does collect a modest amount of customer data through its speakers (what music a customer plays, for example), which it uses to optimize our customer's listening experience. Sonos does not sell customer data to third-parties. Sonos does not obtain data from customers when they activate Google's or Amazon's voice assistants on our speakers. That data goes straight to Google or Amazon.