Look before you leap: is litigation the best strategy for Sonos?

"At first they ignore you, then they compete with you, then they buy you (or you sue them for patent infringement)". Inspired by, but not attributed to, Mahatma Gandhi.

Sonos sued Google for patent infringement in January claiming that Google infringed 5 of its patents including technology that lets wireless speakers connect and synchronise with one another. Last week Google retaliated by suing Sonos over 5 of its patents.

This is a perfect example of why *patents are now ants*. This is not a story about 10 patents. That's the tip of the ant hill. Sonos owns 335 patent families and Google owns 23,497. While this story has all the appeal of David vs Goliath, it is an illustration of the risks of counter-assertion and how strategic patent intelligence helps you asses that risk before pulling the trigger.

Some useful background

Sonos was founded in 2002 and shipped its first product in 2005 - that's 8 years before Google launched Chromecast in 2013 (the forerunner of Google Home). Amazon's Echo and Alexa were both launched in 2014. Apple followed with HomePod in 2017.

Sonos was relatively slow off the mark when it comes to patenting, with a ramp up to a peak in 2014, and a decline in activity since then (Figure 1).

Figure 1: Sonos: Patent families by priority year
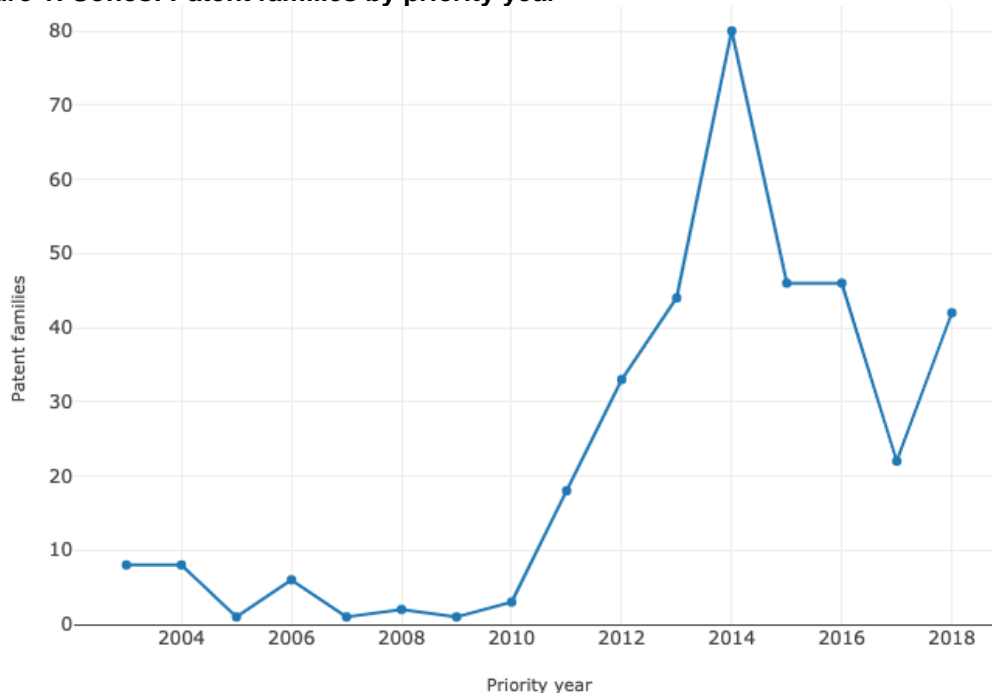
Source: Cipher

Today Amazon has the largest installed base of smart speakers in the US at 53% (January 2020), followed by Google at 31% and Sonos at 4.7%. Apple's HomePod has about the same[1].

The reality is that it's really hard to compete with the size and scale of FAMGA companies, especially when they offer their own integrated music services (Google Play Music, Amazon Music, Apple Music). Spotify went through very similar issues leading up to its EU anti-trust complaint against Apple in 2019[2].

What do you want to achieve?

CEOs who are considering litigating their patents should be clear on the end-game. Objectives include:

• **Injunction:** while technically a remedy, no one in high-tech should expect to eliminate the competition, or even slow them down.
• **Royalties:** this is the most common commercial solution and can be the route taken by companies whose core business is failing, think Blackberry suing both Facebook and Twitter in 2018/19.
• **Investor relations:** sometimes it's hard to do nothing. If the market values you as a pioneer, then you sometimes need to be seen to stand up for your rights.
• **Cross-license:** innovation in high-tech inevitably takes you into high density patent landscapes. A good way to neutralise known threats is to agree to license your patents in exchange for a license to theirs.

Understanding Sonos patent strategy

How does this help comprehend Sonos' patent strategy? Firstly, this is a patent dispute, so ignore the hyperbole about a collaboration that went wrong. This is not a trade secret dispute of the sort highlighted by Google/Waymo[3]. Secondly, this is not Sonos' first rodeo. In 2014 they sued Denon over its HEOS speaker, only to settle after 4 years with no discernible victory. Sonos understand the cost, delay and uncertainty of litigation. Thirdly, Sonos is a successful independent company (recent reported revenues of $1.3B), so not at the stage where patent monetisation is the revenue stream of last resort.

This brings us to cross-licensing. Any company starting a patent dispute knows that actions have consequences, and the text-book response to an in-bound assertion is an attack on validity and counter-assertion. In the next section we describe a common approach for assessing counter-assertion risk, a.k.a. whether you are biting off more than you can chew.

Using models to war-game outcomes

Our recommended approach is the use of Strategic Patent Intelligence (SPI) models, also referred to as Optimisation Models. This approach is how owners of patent portfolios estimate their exposure to third party risk.

The inputs to the model include:

[1] https://voicebot.ai/2020/04/28/amazon-smart-speaker-market-share-falls-to-53-in-2019-with-google-the-biggest-beneficiary-rising-to-31-sonos-also-moves-up/
[2] https://timetoplayfair.com/timeline/
[3] https://www.wired.com/story/uber-waymo-lawsuit-settlement/

1. Patent to technology mapping
2. Revenue data
3. Estimated royalty rates

Step 1 used to be slow and expensive. Manually reviewing Google's 23,497 families (at an hour a patent) would take over 1,000 days. Cipher, our strategic patent intelligence platform, harnesses machine learning to automate this step with high degrees of accuracy[4]. Figure 2 illustrates how a Cipher Classifier compares the patents of Google and Sonos in the area of Noise Cancellation, where it's easy to see that Google dominates in both the time and quantity dimensions.

Figure 2: Noise Cancellation comparison
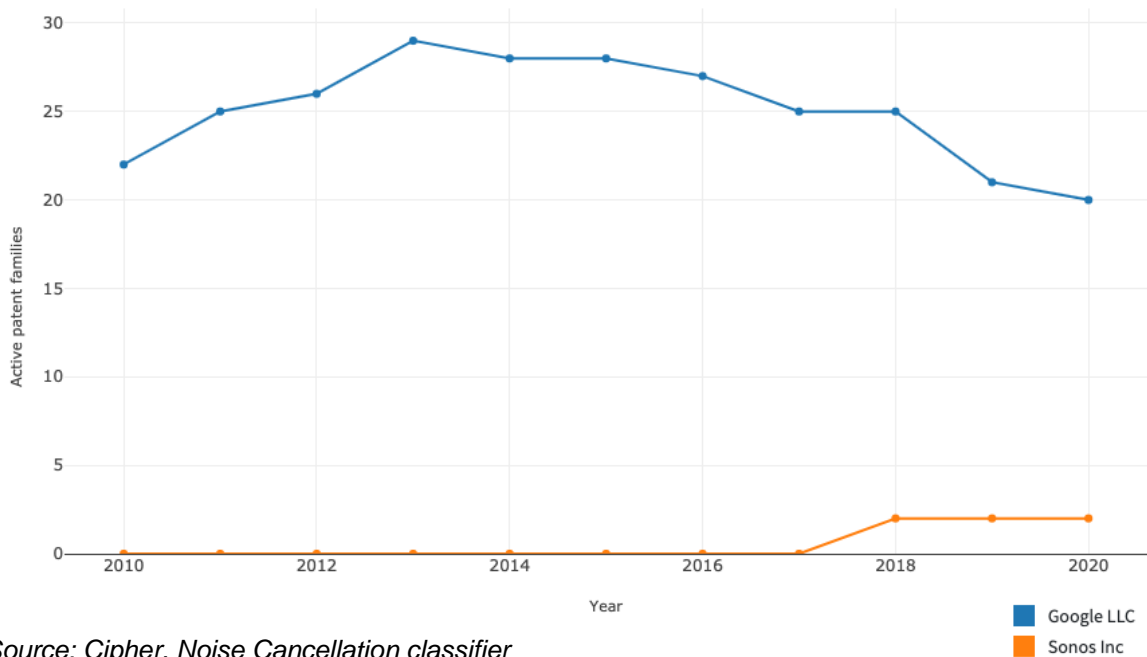
Source: Cipher, Noise Cancellation classifier

Step 2 is essential as the bedrock formula is to understand the impact of your patents on their revenue (minus the impact of their patents on your revenue). This requires care and attention as there will typically be many technologies in issue. Google, for example, have asserted patents across music search, ambient noise and echo control, digital content rights management and wireless networking.

Step 3 includes the addition of royalty rates and factoring in the reality that unless you own 100% of the patents relating to a particular technology (and no-one in high tech does), this will typically attract a scaling factor. The complete model is published and explained in our article *How Many Patents are Enough?* and the recently published sequel *Beyond Portfolio Optimisation*[5]. Earlier this week, we were delighted to participate in a *webinar* with both Red Hat and BAE Systems discussing how models like this work in practice.

Taking a holistic approach in this way enables evidence-based strategic planning. Modern day patent strategy is not about choosing half a dozen patents and hoping for the best. It's about analysing your portfolio as a whole and comparing it against others that you consider to be threats. There will be inevitably be areas where you will be strong, but these need to be

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[4] *Cipher has been independently tested for accuracy Refer to Construction and Evaluation of Gold Standards for Patent Classification, Harris, Trippe, et al World Patent Information, April 2020*
[5] *How Many Patents are Enough? (Swycher, Harris, IAM Autumn 2019 and Beyond Portfolio Optimisation? (Swycher, Harris, McMahon) IAM, June 2020. The derivation of the equations are set out in the Role of AI in Evidence-based Strategic IP decisions (Swycher, Harris, IAM, December 2018)*

balanced with your areas of weakness. It wouldn't have taken much research to figure out Google's approach. This was what Mike Lee, Head of Patents at Google, had to say in the recent *Cipher Report on Portfolio Optimisation*:

> *"Data science and machine learning helps us better manage and shape our portfolio. The ML tools and models we've built have enabled us to operate more efficiently and at scale so that we can execute on our patent strategy."*

To understand how this model would work, see an example worked through in the *video here*.

It will be interesting to see how Sonos responds to Google's move. While the PR around the litigation suggests that Amazon may also be in Sonos' sights (who own 10,355 patent families), history suggests that there is no long-term joy in starting a patent war.

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