Testimony of

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Before the

U.S. Senate Committee on the Judiciary

Subcommittee on Intellectual Property

Hearing on

Protecting Real Innovations by Improving Patent Quality

June 22, 2021

I. Introduction

Good Afternoon. I would like to thank Chairman Leahy, Ranking Member Tillis and distinguished members of the Intellectual Property Subcommittee for the opportunity to present my views regarding patent quality.

My name is Julio Garceran. I am the Chief Intellectual Property Counsel for Cree, Inc. Cree is a publicly traded compound semiconductor company (NASDAQ:CREE) based in Durham, North Carolina with about 3500 employees and a patent portfolio of about 2150 worldwide patents. Cree was founded in 1987 as a start-up out of North Carolina State University. Cree was financially backed by friends and family along with the maxed out personal credit cards of its founders, and Cree's technology was backed by North Carolina State University patents.

Cree is an American success story, and patents were critical to that success. Throughout its history, Cree has been at the forefront of silicon carbide and gallium nitride materials and devices. Cree started the LED lighting revolution with the advent of the first commercial lighting class LED, and Cree is now leading the transition from traditional silicon to the more energy efficient and robust silicon carbide, which is critical to the country's global leadership in driving the rollout of high-growth technologies like electric vehicles (EVs) and 5G wireless infrastructure. Cree's patents also help position the United States in a place of leadership in such important technologies.

I have been at Cree for almost sixteen (16) years. When I started, Cree employed about 1350 employees and grew to over 6000 employees at its peak, with 3 distinct lines of business: LED Chips and Components; LED Lighting and Wolfspeed Compound Semiconductors. When I joined, Cree had a patent portfolio of about 270 issued U.S. patents which grew to almost 2500 issued US patents. In the last 3 years, we have sold off both the LED Chips and Components business and the LED Lighting business, allowing Cree to focus all of our attention on growing our Wolfspeed business. Cree will be changing the corporate name to Wolfspeed later this fall to reflect this new focus.

Unlike some influential companies that rely on other mechanisms to protect their technology, Cree relies heavily on patents to protect its innovations. Once Cree's products are sold in the marketplace, would-be competitors can obtain those products, reverse engineer them and indiscriminately copy the innovative structures and features in those products. Cree's patent portfolio is essential for preventing such behavior. Therefore, Cree, like other domestic manufacturers and innovators, needs a strong patent system to protect its innovations from those unwilling to commit the substantial resources that are required to stay at the forefront of technology. The United States needs a strong patent system to protect those willing to invest in innovation.

With my almost 30 years of intellectual property (IP) legal experience as an attorney at a large IP firm, a corporate counsel at a large multinational corporation to Chief IP Counsel at Cree, I have been involved in all aspects of patent practice and have found myself on both sides of the patent debate. I have managed Cree's substantial patent portfolio using high

quality patent counsel to procure the patents with inventions conceived by scientists at the very forefront of their field. In fact, the Institute of Electronics and Electrical Engineering (IEEE) periodically publishes a Patent Power Scorecard which ranks the patent portfolios of companies worldwide regardless of size. At one point, Cree's patent portfolio ranking in the IEEE Patent Power Scorecard was Top-10 in the world!

We have successfully enforced our patents to prevent the unauthorized use of our technology by competitors. We have done so by pursuing licensing discussions and filing patent infringement suits in the United States district courts and in the United States International Trade Commission (ITC). We have also had to defend ourselves against patents of low quality.

II. Why Are We Talking About Improving Patent Quality?

A. Low-Quality Patents Hurt Business

The high cost of patent litigation fuels a business model where "patent trolls" bring patent litigation, not to legitimately enforce a patent's technological scope, but to squeeze legal settlements from companies. This business model bets on companies preferring to settle patent disputes for significant amounts that are below patent litigation costs. Such a business model results in legitimate industries wasting significant resources to settle patent disputes involving low-quality patents. Smaller businesses are especially vulnerable to such practices because they cannot afford to divert resources to pay for low-quality patents.

The high cost of patent litigation also can create an incentive for low-quality patent owners to file patent litigation against smaller competitors, not to recoup compensation for the use of patented technology, but to burden the competitor with increased spending. These costs are better spent on more productive endeavors, like research and development, and can be very detrimental to a small business.

Cree has been involved in patent litigations and litigation threats involving patents of low quality as well as patents that are not of low quality, but the patent owner is unreasonably, and in some cases willfully, overreaching on the scope of the patent. In some cases, Cree has been able to ward off such lawsuits by threatening to seek attorney fees, damages or sanctions against the patent owner. Unfortunately, in other cases, Cree has had to spend millions of dollars in legal fees along with the hidden costs and distractions of litigation before a resolution is reached.

With increased patent quality, companies can at least make a rational business decision based on the technological merit of a patent, rather than being forced to pay settlement fees to avoid the exorbitant costs of patent litigation.

Increasing patent quality would hopefully lead Judges to more confidently and consistently entertain making early case dispositive rulings, such as early summary judgment motions coupled with early claim construction on a dispositive term. Disposing of baseless or at least unreasonable patent litigation early will reduce the specter of spending millions of dollars in costs and distractions before getting any certainty as to the outcome of the patent litigation.

Additionally, Judges may be more willing to grant a victorious party the award of legal fees or even sanctions, for example under 35 U.S.C. section 285 or F.R.C.P. Rule 11, against a patent owner (or their attorneys) who knew or should have known that their claims were unreasonable or baseless. High-quality patents should enable patent owners or presiding Judges to more clearly understand the merits of the patent litigation and enable Judges to confidently identify and more consistently punish egregious behavior, thereby deterring unreasonable or baseless patent litigation.

B. Low Quality Patents Create an Uncertain Business Environment

With increased patent quality, companies or investors can confidently make rational business decisions based on the merits of a patent. Patent quality adds certainty surrounding the validity and legitimate technological scope of the patent. The small business can intelligently decide whether to continue litigating because they are confident in the outcome. An investor or venture capitalist can be more confident in investing money in a new venture that owns or licenses high quality patents because the validity and scope of those patents is clear.

When the Cree founders were trying to raise money after the friends and family network dried up, the Cree licenses to the North Carolina State University patents were critical. Angel investors and venture capitalists want to know that the company is backstopped by high quality patents to protect the company's innovations.

I applaud the efforts of this Subcommittee for seeking ways to improve patent quality and inherently strengthen the patent system. However, before I move on to some specific suggestions on how to improve patent quality, I caution against efforts to improve patent quality being used to weaken the patent system by making it more difficult to obtain a patent or forcing inventors to overly narrow their patent scope. Increased patent quality should mean producing valid patents with a scope that clearly defines their broadest inventive contribution to society.

III. Ways to Improve Patent Quality

In my view, there are various practical steps that can be taken to increase patent quality.

1. Keep USPTO Revenues in the USPTO

Diverted USPTO revenues could fund improvements to the Examining force and the infrastructure of the USPTO. The USPTO serves the highly valuable function of protecting and thereby incentivizing innovation. It needs to at least retain its revenues to make sure it can operate in the world-class manner that the cutting-edge innovators of our country deserve. These funds can be used to:

a. Attract the brightest and best technical minds to be patent examiners with more competitive salaries and incentives, enabling increased hiring requirements
b. Fund headhunting and recruiting events for potential examiners, especially those currently in industry
c. Improve and standardize training materials and update these materials more frequently, e.g. after important PTAB or judicial decisions

d. Improve technical training
e. Improve searching tools
f. Improve infrastructure.

2. Increase use of 35 U.S.C section 112 in Examining Patents

The outcome of a patent litigation typically hinges on the meaning of a single or handful of claim terms. In some instances, the meaning of a claim term is simply ambiguous or indefinite, and the patent owner will argue for an interpretation that supports infringement but avoids the prior art.

In other instances, the meaning of a claim term is relatively clear, but the low- quality patent specification does not support a broad meaning of the claim term. The uncertainty surrounding the proper scope of the claim occurs because the low-quality patent owner is typically arguing for a broader claim interpretation; however, the inventor either 1) did not actually contemplate the invention for which the patent owner is now advocating, or 2) the patent specification does not enable someone of skill in the art to practice the broader scope being sought.

35 U.S.C. Section 112 provides that the patent specification shall contain a written description of the invention … in such full, clear, concise, and exact terms as to enable any person skilled in the art … to make and use the [invention]." Section 112 is supposed to ensure that claim terms are clearly defined, reflect the invention actually possessed by the inventor and are enabled by the patent specification. However, section 112 rejections are generally considered "non-substantive" and are not pushed during patent prosecution. As a result, these issues don't get resolved until trial (when the patent has a presumption of validity on an issue that was not substantively examined), when the outcome is uncertain and after millions of dollars in legal fees and years of uncertainty and distraction. By dealing with some of these issues during the patent examination process, much of this waste and inefficiency may be avoided. Accordingly, some changes that could be implemented include the following.

a. Current 112 standards for enablement and written description should be more heavily enforced pre-grant, thereby encouraging more detailed disclosures at filing and clearly setting out the scope of the claims before the patent issues.
b. Patentees should be required by the patent examiner to use the "full, clear, concise, and exact terms" in their claims consistent with the patent specification, and as patent prosecution evolves, the examiner should require the patentee to resolve any ambiguity, consistent with the patent specification, that arises with the claim terms being relied upon for patentability.
c. In fact, we should consider requiring definitions of important claim terms, e.g. glossary of terms, in the patent specification and/or during prosecution.
d. In Office Actions or Reasons for Allowance, the examiners should provide their interpretation of important claim terms or clarify the patentable subject matter, not just a recitation of the entire claim, and the patentee should be given an opportunity to respond.

I believe that ensuring that patent examiners more rigorously enforce section 112 standards by requiring more clear definitions and clarifying the scope of those terms will result in higher quality patents. When the scope of patents is clear, businesses can make sound and more efficient business decisions. If the decision is to defend against a high-quality patent in litigation, then the litigation process should also be more efficient because judges should feel more comfortable in resolving dispositive issues early in the process and punishing those who bring baseless or unreasonable litigation.

3. Adjust Examiner Incentives/Programs

The responsibility for improving patent quality will fall on the patent owners to write more robust patent applications and on the patent examiners to implement the standards that lead to improved patent quality. Examiner incentives need to be adjusted to make quality a priority. The current count-based system appears to encourage quantity over quality. If patent examiners are incentivized to produce high quality patents, then the result will be more high-quality patents. The following are certain actions that can be taken to improve patent quality.

a. Quality metrics should be established, e.g., metrics promoting use of section 112 rejections and providing clear interpretation of claim terms.
b. Supervisor patent examiners (SPE) and Primary Examiners (PE) should have quality-based metrics, including incentives for examiner training, mentoring and feedback gathering.
c. Examiner interviews should be encouraged and made easier to initiate from either side as an efficient way to prosecute patents. However, interview summaries need to clearly document the interpretation of important claim terms, patentable subject matter and arguments for patentability.
d. Training/cooperation with other searching authorities, e.g., EP, WPO, JP, KR
e. Increased technical training opportunities with industry
f. Decrease the time required to obtain an issued patent. This will likely require more investment in the PTO, but a goal of 1-2 years for the time from filing should be the goal. The fact that it can sometimes take 4-5 years seems unreasonable.
g. Examiner Review/Feedback mechanism
    1. Supervision and review of Examiners within the Examining Corps is inconsistent and poorly understood by applicants and patent counsel. The USPTO should articulate more clearly how Examiners are reviewed and provide clear internal and external feedback procedures and accountability.
    2. Examiner general performance (allowance rate, feedback from patent bar, PTAB decisions, pre-appeal decisions, judicial decisions, etc.) should be tied to advancement/compensation.
h. Incentive for successful Pre-Appeal Brief Request for Review process (which rarely results in change of rejection). After a final rejection, an applicant can abandon the application, file a request for continued examination (RCE) or appeal the rejection. To avoid the extra cost and time associated with a full appeal, the applicant can request for a pre-appeal brief review. The request only requires up to five pages of argument but no amendments. After the request is filed, the examiner and two conferees review the arguments and decide whether to allow the application, reopen prosecution or to proceed with a full appeal. The pre-appeal program allows the

applicant to avoid the full appeal process which has higher office fees, attorney fees and long delays. While a great tool for improved efficiency in principle, the program does not seem to be utilized successfully with any frequency.

i. Incentive for successful After Final Consideration Program (which again is a good concept that is not consistently implemented). The After Final Consideration Program was introduced to again improve efficient patent prosecution through increased collaboration between the examiner and the applicant. In response to a final rejection, the applicant files a request for consideration under the program with an amendment to at least one independent claim that does not broaden the scope of the claim in any aspect. If the examiner's review does not result in an allowance of all the claims, then the examiner is to request an interview with the applicant. This program has led to some improvement in patent allowance efficiency, but it should be used more to increase patent prosecution efficiency, including increased quality.

j. Reduced incentive for Examiners to provoke stream of requests for continued examination (RCEs) - anecdotally, I have heard that Examiners have seemed to reduce the numbers of RCEs filed due to changes in incentives.

IV. Conclusion

Patent quality brings clarity to a patent's scope which should equate to the inventor's inventive contribution to society. Patent owners should be rewarded for their time, effort and investment in obtaining patented technology. Efforts to improve patent quality should not weaken the patent system or result in overly narrow patents. However, American businesses are being hurt by the significant costs and uncertainty caused by patents of dubious quality. Instead of continuing to waste the resources of our nation's industries on low quality patents, we need to implement ways to improve patent quality on the front end.

Thank you.