United States Senate Committee on the Judiciary
Subcommittee on Intellectual Property

Hearing on
"The State of Patent Eligibility in America: Part III"

Answers to Questions for the Record
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Chairman Tillis

1. How is the current state of patent eligibility hindering Cyborg's long-term growth and revenue potential? Can you try to quantify that for us in terms of lost jobs and economic development?

   Answer. As with any business, it can be difficult to assess the long-term damage associated with a singular root cause. It is not difficult, however, to determine that the current state of patent eligibility has negatively affected Cyborg's growth potential. In one specific occurrence, which was discussed in my testimony, a lack of faith in the patent system led us to abandon a market segment altogether, the opportunity cost of which we estimate to lie in the tens of millions of dollars, or several dozen high-paying technology jobs.

2. Can you explain why the current lack of certainty around Section 101 so negatively impacts small business?

   Answer. The current state of § 101 gives us no certainty in the chances of issuance in our patent applications. Not only has this caused us to forego patent protection altogether at times – since rejected applications are published – but it also severely diminishes the value of our intellectual property portfolio to investors. The value of a single patent for a small business can be massive, and the ambiguity of § 101 can disproportionately affect the market value of the entire business, causing the loss of investment and growth potential.

3. As I understand it when a small company like yours prepares a patent application they have to expend significant resources, resources that will be wasted and can't be invested in further research and development if it is ultimately rejected because the law provides no certainty. Is that correct?

   Answer. That is correct. It is worth noting that significant resources are expended on filing patent applications regardless of the outcome. When a patent application is rejected, however, this investment becomes a loss, both in terms of wasted resources and commercial value. The lack of certainty in the law promotes such damaging rejections.

Senator Hirono

1. Last year, Judge Alan Lourie and Judge Pauline Newman of the Federal Circuit issued a concurring opinion to the court's denial of *en banc* rehearing in *Berkheimer v. HP Inc.*, in which they stated that "the law needs clarification by higher authority, perhaps by Congress, to work its way out of what so many in the innovation field consider are § 101 problems."

   Do you agree with Judges Lourie and Newman? Does § 101 require a Congressional fix or should we let the courts continue to work things out?

   Answer. Yes, I strongly agree with Judges Lourie and Newman. Recent court cases have been ruled with little consistency and seem to move judicial precedent in no clear direction, causing further ambiguity in § 101 interpretation. Legislative clarification by Congress is the proper way to address these issues.

2. The Federal Circuit rejected a "technological arts test" in its *en banc Bilski* opinion. It explained that "the terms 'technological arts' and 'technology' are both ambiguous and ever-changing." The draft legislation includes the requirement that an invention be in a "field of technology."

   a. Do you consider this a clear, understood term? If so, what does it mean for an invention to be in a "field of technology"?

      Answer. 'Technology' is a universally understood term, defined as "the application of scientific knowledge for practical purposes." To further clarify, such a definition should be included in the bill. The adherence to "practical purposes" can be assessed using a practical application test, as proposed in the draft bill outline.

   b. The European Union, China, and many other countries include some sort of "technology" requirement in their patent eligibility statutes. What can we learn from their experiences?

      Answer. Europe has emphasized a connection between "technical character" and patent eligibility. This is communicated in terms of the "improvement" that a particular claim contributes, as compared with the prior art. The emphasis on making the "improvement" explicit seems consistent with the practical application test of the draft bill outline. That said, Europe applies this analysis in a complicated manner, and under a context in which computer programs *per se* are explicitly excluded from patent protection. In the US, by contrast, there is no such explicit exclusions, and the proposed bill is written in clear terms, which will go a long way towards alleviating uncertainty.

   c. Is a claim that describes a method for hedging against the financial risk of price fluctuations—like the one at issue in the *Bilski* case—in a "field of technology"? What if the claim requires performing the method on a computer?

      Answer. Yes, I believe the described method would fall under the category of a "field of technology." Computer enablement would not change this determination. However, while such a patent application may pass this test, it would fail novelty and obviousness assessments in § 102 and § 103.

d. What changes to the draft, if any, do you recommend to make the “field of technology” requirement more clear?

Answer. As mentioned in my answer to part 'a' of this question, adding a specific definition to any category, such as "field of technology" would aid in reducing ambiguity.

3. Sen. Tillis and Sen. Coons have made clear that genes as they exist in the human body would not be patent eligible under their proposal.

Are there other things that Congress should make clear are not patent eligible? There are already statutes that prevent patents on tax strategies and human organisms. Are there other categories that should be excluded?

Answer. The five exclusions included in the draft outline appropriately encompass the categories which should automatically disqualify the eligibility of a patent application. For clarification, these five categories are: fundamental scientific principles; products that exist solely and exclusively in nature; pure mathematical formulas; economic or commercial principles; and mental activities.

4. I have heard complaints that courts do not consistently enforce Section 112 with respect to claims for inventions in the high tech space.

a. Are these valid complaints?

Answer. I am unable to validate these concerns, as I lack any relevant experience. With that said, some variance in court decisions can be expected due to the ambiguous nature of the law.

b. Do the proposed changes to Section 112 adequately address those complaints and limit the scope of claims to what was actually invented?

Answer. Yes, by limiting functional claim elements to the structure described in the specification, § 112(f) as proposed would limit the scope to what was contemplated by the inventor at the time of filing the patent application.

c. Are you concerned that the proposed changes will make it too easy for competitors to design around patent claims that use functional language?

Answer. I believe that it is the duty of the applicant to diligently explore and claim the possible functional variations of a patent application. While the proposed changes do pose a certain level of concern, the benefit of the § 101 improvements outweigh this cost.

5. There is an intense debate going on right now about what to do about the high cost of prescription drugs. One concern is that pharmaceutical companies are gaming the patent system by extending their patent terms through additional patents on minor changes to their drugs. My understanding is that the doctrine of obviousness-type double patenting is designed to prevent this very thing.

The Federal Circuit has explained that obviousness-type double patenting “is grounded in the text of the Patent Act” and specifically cited Section 101 for support.

Would the proposed changes to Section 101 and the additional provision abrogating cases establishing judicial exceptions to Section 101 do away with the doctrine of obviousness-type double patenting? If so, should the doctrine of obvious-type double patenting be codified?

Answer. The proposed changes to § 101 are not likely to eliminate obviousness-type double patenting, since § 101 will still read "Whoever invents or discovers any useful process, machine, manufacture, or composition of matter, or any useful improvement thereof, may obtain a patent therefor," though this may depend on how the Courts interpret the statute. Codifying the doctrine would remove uncertainty in this regard.

6. In its *Oil States* decision, the Supreme Court explicitly avoided answering the question of whether a patent is property for purposes of the Due Process Clause or the Takings Clause.

   What are the Due Process and Takings implications of changing Section 101 and applying it retroactively to already-issued patents?

   Answer. Drawing from my experience as a small patent owner, I can only foresee that the proposed changes will improve the strength and value of existing and future patents. Therefore, I am strongly supportive of applying the proposed legislative changes retroactively. I cannot comment on the Due Process and Takings implications, as I am by no means an expert in Constitutional Law.