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Patentable Subject Matter Reform

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The law of patentable subject matter is a mess. But Congress should tread carefully in reforming that law to make sure that it preserves what works and doesn't end up creating more uncertainty. The Tillis-Coons bill makes dramatic changes to the law of patentable subject matter, overturning not just a decade's worth of Supreme Court precedent but nearly eliminating nearly two hundred years of doctrine. What replaces that doctrine matters critically. Tillis-Coons offers some promising approaches, but also presents some risks depending on how the courts interpret the bill.

I offer some principles to consider in assessing the bill.

The current 101 rules are bad for life sciences but might be good for software innovation. The primary effects of *Alice* and related cases have been in software and business method patents and in genetics and medical diagnostics patents. The characteristics of those industries and the problems they face are very different. Life-sciences industries depend heavily on patents, and there is anecdotal (though much less empirical) evidence that some of those industries have suffered from the unpatentability of medical diagnostic and treatment procedures.

In the software industry, by contrast, patents are much less central to innovation. Further, innovative software companies have been beset with suits by non-practicing entities or "patent trolls" – entities who don't make anything themselves and mostly didn't invent anything either, but who take advantage of the cost and uncertainty of patent litigation to extort nuisance-value settlements. Those nuisance suits had grown to be the majority of all patent lawsuits earlier this decade, overshadowing legitimate uses of the patent system to protect innovation. Those cases almost always lose on the merits,¹ but it is cheaper to settle them than to invalidate the patents.

In the last five years we have started to get the nuisance-value lawsuit problem under control. Part of that is the result of the America Invents Act and the availability of IPRs. But part of it has been *Alice*. Both have allowed defendants to weed out weak

¹ See my empirical study with John Allison and David Schwartz, *How Often Do Non-Practicing Entities Win Patent Suits?*, 32 Berkeley Technology Law Journal 2325 (2017), available here: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2750128).

patent claims more quickly and cheaply than before. That is particularly true because patentable subject matter is treated as a pure question of law, which means that it has often been possible to eliminate ineligible patents on a motion to dismiss before spending much money on litigation or discovery. That is an important benefit of the present system.

The Federal Circuit's application of 101 law is inconsistent and uncertain.

Unfortunately, courts have found it hard to apply the *Alice* test. Some of that may reflect disagreement with the Supreme Court. But it may also reflect the fact that there is no way to create a clear rule that distinguishes abstract from non-abstract cases. The result is that the Federal Circuit regularly finds seemingly indistinguishable patent claims both patentable and unpatentable in different cases. That uncertainty undermines much of the benefit that might exist from the doctrine. And it doesn't necessarily help the life sciences industry, since uncertain protection can make it harder to fund research and development.

Further, the Federal Circuit has increasingly issued inconsistent opinions on the question of whether patentable subject matter can be resolved on a motion to dismiss or even on summary judgment. That undermines the benefits that even a confusing law provide in weeding out weak claims filed by patent trolls.

The abstract ideas doctrine is a standard, not a rule, and some uncertainty is to be expected as the law develops. But unfortunately the Federal Circuit precedent seems to be getting less, not more, certain over time. So the desire for legislative reform is understandable.

The bill makes a dramatic change to patent law. A conservative approach to patentable subject matter would focus narrowly on identified problems in the medical diagnostics business, rendering significant new medical discoveries patentable when they have a practical application but otherwise leaving the law unchanged. A narrower bill focused on those issues would likely have a broader consensus behind it, would not eliminate two hundred years of legal doctrine, and would not risk encouraging patent abuse.

That is not the approach the current bill takes. Rather than target the effect of *Mayo* on medical diagnostics, or even the *Mayo-Alice* two-step framework more generally, the bill sweeps away two hundred years of rules that have prevented patent law from locking up the fundamental building blocks of nature. The prohibitions against patenting laws of nature, natural products, printed matter, and abstract ideas have

meant that no one could own the idea that $E=mc^2$, the entire concept of communicating over wires, a new musical genre, or a newly-discovered plant.

Eliminating patentable subject matter doctrines needs to be balanced with new doctrines to protect against patent abuse. It would be nice to make the law of patentable subject matter more coherent. But it is important not to undo the progress we have made in combating patent abuse.

If the Congress proceeds with a bill that eliminates the long-standing prohibitions on patenting products of nature, natural phenomena, printed matter, and abstract ideas, it is important that it enact significant safeguards not just to prevent patent abuse but also to avoid inadvertently rendering songs, poems, mathematical equations, and broad ideas like communicating over wires patentable.

The current bill makes some important efforts in this direction. First, it adds a new requirement that the invention must “provide specific and practical utility in any field of technology.” Read broadly, this could replace the abstract ideas test that isn’t working with a more useful test that gets at what we really care about: is the patentee claiming to have invented something *technological*? Distinguishing between technological and nontechnological contributions is actually a pretty good way of weeding out many of the problematic patents while keeping real technological contributions. Emphasizing that a patent must cover a technological invention to be patentable should, properly understood, prevent the bill from expanding the scope to cover music, printed matter, and other things for which patent protection seems inappropriate. It will also allow courts to continue rejecting patents on nontechnological concepts that just happen to be implemented in a computer. In effect, the new technology requirement would stand in for the judicially-created exceptions to patentable subject matter that we have developed over the past two hundred years.

But I worry that burying that central requirement in the definition of “useful,” a term already in the patent act with a much more limited meaning, coupled with the legislative history indicating that courts should err on the side of finding eligibility, will prevent courts from giving this requirement its full effect. I also worry that courts will not treat “usefulness” as a legal question and therefore that we will lose the ability to weed out frivolous cases quickly and cheaply. Congress could help by emphasizing that this is a new requirement of usefulness, not just a restatement of the old utility doctrine, and by giving examples of how it might apply.

A technological innovation requirement is an important bulwark, but it is not enough. It would not, for instance, prevent Samuel Morse from patenting the entire idea of communicating over wires. The second protective provision in the bill is the change to section 112(f). I understand this change to expand the role of that section and to prevent patentees from obtaining broad, functional patents that cover any technology implementing their idea in any way. Instead, the revised section 112(f) would limit functional language in any patent claim to the particular implementations of that claim disclosed in the patent and equivalents thereof. Doing this will prevent patentees from claiming inventions that are too abstract – not, as current law does, by declaring it unpatentable, but by limiting those abstract claims to specific technology disclosed in the text of the patent itself. That would address the overbroad Morse claim, among others.

Assuming that this revised statute incorporates the existing court rules requiring that functional claims to software be limited to algorithms disclosed in the patent and invalidating patents that don't actually disclose any structure, I think this is an important improvement to the law. Indeed, I think it is a valuable change to the law that should be considered even if Congress does not change the law of patentable subject matter. I explain the benefits of limiting functional claiming in more detail in my paper "Software Patents and the Return of Functional Claiming."² Again, legislative history explaining the commitment to reinvigorating the rules against functional claiming would be helpful in pushing the courts to give the revised section 112(f) the weight it needs if it is to shoulder this additional burden.

² 2013 Wisconsin Law Review 905, available here: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2117302.