The 101 of Section 101

GENERAL BACKGROUND

For years, no one cared about 35 U.S.C. § 101 because it mattered for 1% of patents. But the Supreme Court has revived its limit on § 101 “patent-eligibility” (to be distinguished from “patentability” if you are a hyper-technical person).

TEXTUALISM: “ANYTHING UNDER THE SUN THAT IS MADE BY MAN”

The basis for Section 101’s limit on patent-eligibility is not in the statute itself. The statutory language is broad, making all “process[es],” “machin[es],” “manufactur[es],” and “composition[s] of matter” patent-eligible. This broad language (and some legislative history) led the Supreme Court to note in 1980 that the provision permits patenting of “anything under the sun that is made by man.” Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980).

THE OVERRIDING POLICY: SOME THINGS SHOULD NOT BE PATENTED

There are certain things, however, we all know should not be patented – e.g., the process of sequentially playing the notes that make up the riff for Deep Purple’s “Smoke on the Water.” Separately, the Supreme Court has decided that no one should get a patent on any of the “basic building blocks of innovation” – i.e., should not be able to tie up core knowledge that other people might use to invent other cool stuff. The two main basic building blocks the Court has identified are “natural phenomena” (a/k/a “laws of nature”) and “abstract ideas” (or sometimes/similarly “algorithms”). Natural phenomena are typically an issue in biotech cases, while abstract ideas are typically involved in software cases. These non-statutory limits to patent-eligibility drive all the recent case law.

OREILLY v. MORSE: THE BEGINNING

One-hundred-fifty years ago, Samuel Morse obtained a patent claim for conveying information remotely by any use of electromagnetism. The Supreme Court killed the claim while making grand statements about Morse not inventing electromagnetism, him not being able to get a monopoly on basic natural stuff, and the like. See O’Reilly v. Morse, 15 How. 62, 117 (1854). The case sets the ground work for today’s law, but it does not come up much today.

PARKER v. FLOOK, GOTTSCHALK v. BENSON, AND DIAMOND v. DIEHR: SETTING THE DIVIDING LINE

In the 1970s, software started to be patented, and the Supreme Court issued a trio of decisions that helped draw a line between what constituted a patent-ineligible abstract idea or mathematical algorithm, and what constituted a patent-eligible application of the idea or mathematical algorithm. Another way to phrase the idea/application distinction (which the Court later adopted in Mayo) is: “Does the claim preempt effectively all uses of the idea, or does it instead leave open other applications of the idea for competitors?” The facts in the cases help show where the line is drawn:

- Benson and Flook failed – One failed because its claims merely recited executing a particular algorithm for converting number formats, but was not otherwise limited. The other failed because it involved computing updated “alarm limits” for some industrial process, but recited no particular implementation or use of the alarm limits. See Gottschalk v. Benson, 409 U.S. 63 (1972); Parker v. Flook, 437 U.S. 584 (1978).
- Diehr succeeded – Although it used the Arrhenius Equation (an algorithm) to compute a time for opening a mold around solidifying rubber, it also recited the physical implementation steps of obtaining the mold temperature with a thermocouple, and physically opening the mold. Diamond v Diehr, 450 U.S. 175 (1981).

So there is something important about having real-world physical inputs and outputs for your computer, and not just having internal computer processing. There is also some language in Flook that suggests the Court is mixing up novelty under 102 with patent-eligibility under Section 101, but Diehr said there was no such error in Flook. This is relevant because many people think the Court started making that mistake again in Mayo.

MAYO v. PROMETHEUS – A REVIVAL FOR 101 & THE “GRAND UNIFYING THEORY”

In intervening years, the Federal Circuit made some rulings that people read as being extremely expansive for patent-eligibility, and the Supreme Court said nothing. Then about 10 years ago, the Supreme Court took a Section 101 case on a medical diagnostic process and dismissed it on procedural grounds—but three dissenters would have killed the patent.
So we worked Section 101 into a case we had pending for the Mayo Clinic’s labs, sued by Prometheus Labs on a similar patent. The Prometheus patent recited a method that was much like a field sobriety test: (a) give a patient a test dosage of drug A; (b) look in the patient’s blood for levels of chemical that result from metabolizing the drug; and (c) recognize that the dose is too low, too high, or just right. At the time, the Federal Circuit was applying its “machine or transformation” standard for patent-eligibility, which we knew was not a real standard and which the Supreme Court eliminated in *Bilski v. Kappos*, 561 U.S. 593 (2010). The courts were also applying very different tests for life sciences technologies as compared to software technologies.

We decided that, to win, we needed a “Grand Unifying Theory” that would apply equally to both technology areas, so we argued “preemption” as the standard—i.e., if a claim preempts all essential uses of the law of nature or abstract idea, then it is ineligible. Such a standard fits with the idea that we don’t want to block competitors from using fundamental building blocks, and it explains the “machine or transformation” test—i.e., a machine or transformation recited in a claim makes the claim patent-eligible if it narrows the claim to a particular implementation, and it stops the claims from effectively monopolizing the law of nature or abstract idea. The Court adopted this standard via a 2-step test:

(a) is the claim directed to a law of nature or abstract idea; and

(b) if so, does it additionally recite enough more (a so-called “inventive concept”) so that it is really a patent on a particular implementation rather than a patent on the law of nature or abstract idea itself.

See *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. ___ (2012). The Court reasoned that Prometheus’ claims locked up all relevant uses of the natural correlation between the drug metabolites and the patient’s health. In the ruling, the Court created some heartburn by referring to Prometheus’ patent as involving “well-understood, routine, conventional activity previously engaged in” by scientists who work in the field.” Many patent lawyers have focused on those words, assumed the Court was using them in a special patent manners—and accusing the Court of confusing 103 obviousness with 101 patent-eligibility.

**ALICE v. CLS BANK – MOVING MAYO INTO SOFTWARE**

In *Alice*, the Supreme Court extended the 2-step test of *Mayo* into software—making the Grand Unifying Theory into law. The government had argued that only two types of software inventions should be patent-eligible, but the Court instead used them as non-exhaustive examples:

(a) the invention improves the operation of the computer itself (e.g., encryption software); and

(b) the invention improves some process that is otherwise patent-eligible (e.g., the computer output is used to run an assembly line or assembly process, like in *Diehr* with the rubber mold).

I do think it is important to distinguish an invention that improves the computer, versus an invention where the computer improves the invention (e.g., makes it merely faster or less error-prone). *Alice* also emphasizes that the mere general presence of a computer, network, etc., in a claim will be no help—there has to be something special or unique about how the computer is used.

**DDR v. HOTELS.COM – A POST-ALICE PATENT VALIDATION**

The Federal Circuit’s decision in *DDR Holdings LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014), is important because it is the court’s only post-*Alice* decision to find claims valid, and the invention was not one that the average person would think is clearly patent-eligible. It was an ecommerce invention, and the idea was to display a web page that combined style information from a “host” company, along with product data from one of a number of third parties that sell stuff. The idea was to let the “host” set up an on-line mall that could carry goods (and corresponding data) from many suppliers, yet had a consistent look-and-feel. The two-judge majority found this to be patent-eligible because the problem and solution were really unique to the Internet (there was nothing closely analogous in pre-Internet brick-and-mortar world). Also, the patent pulled off a neat, non-intuitive trick to make it happen. The dissent did not disagree on the law really, but he felt that the invention was closely analogous to prior bricks-and-mortar approaches.