

Technological arts

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The Department of Commerce has ordered me to not file any briefs in *Bilski v Doll*. They can do that for my situation, and it's a bit frustrating, being that the case is in some ways the culmination of several years of research and writing.

But at least I can still blog. [And if you think that my blog entry is somehow an official statement from the Department of Commerce, you're a moron.]

As I'd mentioned in entry #009, the Federal Circuit ruling in *Bilski* was deliberately vague, and left the question to the implementers. It turns out that the folks at the Patent Office took the ball and ran with it, and presented a series of rulings that were much more reserved than allowing anything under the sun to be patentable. It looked like software would become decreasingly patentable, and articles about absurd lawsuits did disappear for a while.

That's where we were under the Bush administration. Under Obama, things are very different. The new administration's choice for the head of the Patent Office is David Kappos, who before the appointment had the title of Vice President and Assistant General Counsel, IP Law and Strategy for International Business Machines (IBM).

Now, I won't bother with conspiracy theories about how Mr Kappos will be a tool of his former employer, or that patent policy will be determined in shadowy meetings in Armonk, et cetera. I won't mention that the Center for Responsive Politics¹ lists IBM as being a top-20 contributor to the Obama campaign, giving just over half a million dollars. That'd just be gauche.

But Mr Kappos's view of what patent law should be matches that of IBM very well. Is it because he helped to shape IBM's policy, or that IBM hired him because his view fit the party line, or because he learned from the corporation and gradually fit to their mold? Who knows, but the outcome is that Mr Kappos's personal positions are very convenient to IBM, and much less convenient to everybody else.

To summarize his key position for our purposes, it is that the USA needs a clean technical contribution test for patentability. If something makes a technical contribution, it should be patentable subject matter, and that's it. Here's a relevant paragraph from his talk at a Brookings event² from a few months back [transcript p 81]:

And my view, where the law needs to move further, building on *Bilski*, is in the direction toward further clarification along the lines of a technological contribution. So an approach that is, in my view, more consistent with

¹<http://www.opensecrets.org/politicians/contrib.php?cid=N00009638&cycle=2008>

²http://www.brookings.edu/events/2009/0114_patents.aspx

whats already being done in Japan and in Europe, where there are—there’s much more of a focus on a technological contribution or some nexus between the technology and the essential features of any invention in order to confer patentability and I think that that goes a long way to solve the problem with the patenting of abstract ideas.

See also the PDF³ linked from that page. Note that he somehow does not consider software or mathematics to be an ‘abstract idea,’ and is referring only to business method-type patents.

The technological arts test is very convenient for IBM. It declares that the business method patents that have taken so much flack in the press should not be valid, but that the software patents that have made \$\$\$ for IBM as its hardware sales shriveled are perfectly valid.

So, it’s no surprise that the same arguments in Kappos’s statements above reappear in IBM’s brief in *Bilski*⁴ [where that PDF link is from Patently-O’s list of briefs⁵]. That brief explains that other tests, like the ‘machine-or-transformation’ test from the Federal Circuit’s *Bilski* ruling, just get in the way, and should be only advisory.

So this is what’s coming, unless the Supreme Court explicitly responds to it: the Patent Office will lean toward a technological arts test.

The key problem with such a test is that it is vague and malleable. At the same Brookings event, John Duffy proposed that we should take an ‘I know it when I see it’ sort of approach: if it’s taught at a technical college then it’s a technological art. Thus, software would be included and tax methods wouldn’t be. [We’ll ignore the fact that most technical colleges teach business courses, or even that the 1990s Federal Circuit explicitly saw nothing in the law to bar business methods.]

As an undergrad, I got a Bachelor in the Arts in Economics, so I suppose Economics is out. But then, my graduate degrees were from the California Institute of Technology, exactly the sort of technical institution that Mr Duffy refers to, and they were happy to give me a degree with *Science* in the name for work in Game Theory, Political Theory, and Economics. So it’s certainly no bright-line test.

You can make fun of Mr Duffy’s proposal, but you probably can’t do much better. Any definition will have its own vague points, and in the end, the technological arts test basically breaks down to: *is it mathy?*

No, wait, that needs refinement too. Jumping back to Kappos/IBM’s position, it is that business methods, even with some math, are not patentable, but more software-ish math should be patentable. The proposal means that a Fourier series used to process time series of cash transactions should be different under the law from a Fourier series used to process an electromagnetic signal. Given this, the best definition I can come up with is: *Is the field of invention, as generally practiced by general practitioners, mathy?*

Or let’s just be properly cynical: IBM’s definition of the technical arts, and we have no evidence that this is not Mr Kappos’s working definition, boils down to: *Is this a field in which IBM is heavily involved?*

³<http://www.law.northwestern.edu/journals/njtip/v6/n2/1/Kappos.pdf>

⁴<http://www.patentlyo.com/08-964-ibm.pdf>

⁵<http://www.patentlyo.com/patent/2009/08/briefs-in-bilski.html>

You are welcome to present your own suggestions as to what a technological arts test should be in the comments; please withhold expletives. Mr Kappos, in his comments at Brookings (and my chatting with him), never claims that he knows the correct bright-line definition of technical arts, which indicates that he is a fundamentally sane human being. But he is still committed to that line of reasoning in determining what is patentable.

The other clause The Constitution gave us one clause, that Congress has the power to grant patents “to promote the progress of science and useful arts”. We have two limitations there: the first is that if it isn’t a science or useful art, it shouldn’t be patentable. Even this is constrained, being that people will slap the word *science* on anything, and laws of nature are excluded, and so on. As above, some consider this subclause broad enough to cover mathy business methods, while others don’t.

The terms *technological arts* and *science and useful arts* are sufficiently amorphous that we can take them as synonyms. So why are Mr Kappos and IBM talking about a technological arts test at all, when it’s right there in the darn Constitution?

By suggesting that we put exclusive focus on that test (which IBM does much more than Mr Kappos), they suggest that the other half of our Constitutional clause—that patent law must “promote the progress”—be shunted to the side. IBM suggests in its brief that once you’ve satisfied the technological arts test, the promotion of progress follows as a throwaway subordinate clause: “... the substantive approach is to determine if the claimed process provides a technological contribution and thus advances the ‘useful arts,’...” [brief p 5]

What would a further restriction on patentability aimed at promoting progress look like? We have some not-seriously-controversial examples, like how the invention must not be a law of nature, and must not be plain printed matter. These restrictions, with an eye toward promoting progress and keeping economic sense in the patent laws, read like restrictions on which technical arts may be patented. That makes sense: even though the intent may be economic sensibility, the operationalization still has to be a restriction on what stuff gets to be patented.

So to say that anything that passes the technological arts test can’t be further barred is to shut any entrée for restrictions to ensure the promotion of progress. Like the printed matter doctrine, the machine-or-transformation test from the Federal Circuit is not an attempt to cut down on what counts as a technological art, but an attempt to cut down on patents that don’t promote progress. If we don’t like that test (and I could certainly quibble), then the solution is not to throw out all efforts to prevent progress-hindering patents, but to find a better solution.

Here’s IBM’s description (on p 17 of the brief linked above) of “...the overall purpose of the patent system: to protect technological advances.” The Constitution required promoting progress and covering technological advances. In IBM’s statement of the patent system’s purpose, the promotion of progress somehow evaporates, leaving only the focus on technological advances. If it’s a technical advance, it merits patent protection, period.

But neither of the Constitution’s two subclauses are by itself sufficient: the law must cover only technological arts, and may only protect technology to the extent that

doing so promotes overall progress. The technological arts test pushes the idea that the technological arts test should be the dominant, or even sole, test for patentability, and should not be fettered by efforts to limit patents to the promotion of progress. It thus draws a harsh red line through an important clause in our constitution.