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No. 13-298

IN THE

Supreme Court of the United States

ALICE CORPORATION PTY. LTD.,

Petitioner,

υ.

CLS BANK INTERNATIONAL, et al.,

Respondents.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

BRIEF OF BRIAN R. GALVIN AS AMICUS CURIAE IN SUPPORT OF NEITHER PARTY

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INTEREST OF AMICUS CURIAE1

Brian R. Galvin respectfully submits this amicus curiae brief in support of the petitioner Alice Corporation.

Amicus has been deeply involved with United States patent law over the past twenty years, particularly as related to software-related inventions, in various capacities. In the past, he has been Chief Technology Officer of two large software companies, and Chief Executive Officer of one small technology company. He is the inventor of fifteen issued United States patents, and has more than a dozen pending patent applications—all of which are in some way software-related. Currently he practices patent law full-time as a registered patent

¹ Petitioners consented to the filing of amicus curiae briefs in support of either party or neither party in a docket entry dated December 11, 2013, and Respondents consented to this filing in a docket entry dated December 11, 2013. Pursuant to Sup. Ct. R. 37.6, no counsel for a party authored this brief in whole or in part, and no counsel or party made a monetary contribution intended to fund the preparation or submission of this brief. In fact, no person made a monetary contribution to its preparation or submission. This brief was authored by Brian R. Galvin solely, and reviewed by counsel prior to filing.

agent, with one large software company and numerous small software companies as clients. He also provides litigation consulting in patent-related matters, generally on the defense (accused infringer) side, and he has been involved as both plaintiff and defendant in patent litigation during his technology career.

SUMMARY OF ARGUMENT

The bewildering state of patent eligibility jurisprudence under 35 USC §101² is unsurprising. Technology marches onward, and patent law has been slow to keep pace. Recent §101 cases have routinely cited a number of "warhorse" cases (e.g., Benson, Flook, Diehr, and Chakrabarty³), each of

² "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.", 35 USC §101

^{Gottschalk v. Benson, 409 U.S. 63, 71-72, 93 S.Ct. 253, 257, 34 L.Ed.2d 273 (1972); Parker v. Flook, 437 U.S. 584, 594, 98 S.Ct. 2522, 2527, 57 L.Ed.2d 451 (1978); Diamond v. Diehr, 450 U.S. 175, 182, 101 S.Ct. 1048, 67 L.Ed.2d 155; Diamond v. Chakrabarty, 447 U.S. 303, 308, 100 S.Ct. 2204, 65 L.Ed.2d 144 (1980).}

which in turn ultimately cites back to a small set of venerable cases from the nineteenth century—cases written during an era when technology was radically different than it is today. One result of this dynamic is the recent emergence of the "abstract idea exception" as one of three judicially-created exceptions to the otherwise plenary scope of §101 (that the emergence is recent will be shown below). But in fact there is no abstract idea exception in the older cases, and the exception exists today only because of careless citations to the older cases.

The perennial issues of §101 can be much more easily dealt with if we start with the statute and then only go further if we need to (which will prove to be unnecessary). As will be argued in detail, there is no need for an abstract idea exception to §101; the key is reinvigorating the utility element of §101. A purely abstract idea would not be "useful"; an abstract idea embodied in a computer (whether in firmware, or in downloaded software, or however "in" a computer) would have a presumption of utility that could be overcome by litigants by showing that the computer so configured does not in

fact have a use. A computer embodying an abstract idea should be presumed useful, and the analysis would then move on to whether it is novel (§102) and nonobvious (§103). But the same abstract idea would not itself be patented; one could use it in research, or could use it in a mathematical proof, or do whatever one wants, *except* using it in a computer configured in such a way as to infringe any patent being considered. This approach is statutorily correct and gives full scope to Congress' plainly stated plenary scope for §101 (i.e., "any" means what it says).

Moreover, the "physical phenomenon" and "law of nature" exceptions, which definitely *do* exist in the case law and which have sound policy reasons, can be shown to be perfectly logical outcomes of a proper statutory interpretation exercise (and thus a reflection of what Congress intends, not requiring judicial creation⁴). That is, physical phenomena and

⁴ Amicus acknowledges that the exceptions were stated first in judicial pronouncements, but they are and always have been consistent with a proper reading of §101, which has used the word "any" since 1793. Thus Morse for example did not go beyond Congress' stated intent, since claiming so broadly as to in effect patent the use of electromagnetic force to transmit a

natural laws are by definition not "new", so they can be excluded simply based on §101 (which states that patents shall be granted to "any new and useful manufacture...or process"). Further, it will be shown that the venerable cases (specifically Morse, Le Roy v. Tatham, Funk Bros., and Rubber-Tipped Pencil⁵) can each be understood without reference to any underlying abstract idea exception.

Benson and Flook will be discussed in detail, in order to argue that they were incorrectly decided, and to suggest that the Court might consider overturning them in order to establish a solid, clear, statutorily-grounded §101 understanding. With this understanding in mind, resolution of this case (and

signal (which Nature has done throughout time) would be claiming something by definition not new.

⁵ O'Reilly v. Morse, 15 How., at 113, 14 L.Ed. 601; Le Roy v. Tatham, 14 How. 156, 174, 14 L.Ed. 367; Funk Brothers Seed Co. v. Kalo Inoculant Co., 333 U.S. 127, 130, 68 S.Ct. 440, 92 L.Ed. 588 (1948); Rubber-Tip Pencil Co. v. Howard, 20 Wall. 498, 507, 22 L.Ed. 410 (1874).

of WildTangent, for which certiorari is being sought⁶) will be straightforward.

Finally, amicus notes that this case is of extreme importance to the United States economy. A very large portion of the value of American companies stems directly from intangible intellectual property. Some of it is of course implicated by trademark and copyright law, and need not concern us here. But the markets value American companies who primarily innovate in information technology—and predominantly in software—at well over a trillion dollars (e.g., Apple, Google, Microsoft, Yahoo!, IBM, Facebook, LinkedIn, etc.—none of whom contributed to this brief in any way). There is a strong upwelling of well-funded groups arguing that, "software should not be patentable" and that, "software patents stifle rather than promote innovation". Amicus believes these groups are mostly driven by interest (which of course is the American way), but notes that many of the

⁶ and with whom *amicus* has no relationship; WildTangent, Inc., Petitioner v. Ultramercial, LLC, et al., Case No. 13-255, Cert. Petition Pending.

arguments used are specious (for example, equating short-term stock price motions after a patent lawsuit is announced to value destruction, while neglecting any subsequent rebound). In any case, while abuse of patent litigation is clearly a matter susceptible to management by the courts, and this Court most of all, the delicate balance between "promoting the Progress" and "stifling innovation" is clearly a matter for the political branches, and amicus urges the Court to avoid the temptation to shift that balance by further constraining the reach of patent eligibility under §101.

ARGUMENT

This is understood by all to be an important case. The potential economic impact of this case was discussed above. But as importantly, this case highlights an area of the law where inadvertence and the passage of time have led a significant legal issue astray. And this case is a good opportunity for the Court to set things back on track.

Recent §101 Cases Have Drifted From What Precedent Demands

The power of *stare decisis* being what it is, all of the briefs in this case, as indeed all recent Court pronouncements regarding §101 issues, have repeated the same litany of cases standing for the notion that, while Congress intended patent eligibility under the threshold test of §101 to encompass "anything under the Sun made by man", there are three judicially created exceptions. These are the well-known law of nature exception (going back to Morse), the physical phenomenon exception (going back really to Boult v. Watt), and the abstract idea exception (which seems to have emerged from Rubber-Tip Pencil). Of these three exceptions, it is the abstract idea exception that concerns us in this case. Briefs for both parties, as well as the flurry of recent Federal Circuit opinions (described in detail in many of the amicus and party briefs), and all recent Supreme Court and Federal Circuit cases dealing with software patents (e.g., Bilski; many more are discussed in the various briefs and will not be elaborated here) start by citing Benson, Flook, and Diehr, and then continue by trying to make sense of them. Moreover, the situation is even more confused because many

commentators and attorneys conflate the "three exceptions" implicitly; for example, the holdings of *Mayo* are used to argue for how to handle the abstract idea exception, even though *Mayo* dealt only with the natural phenomenon issue. Two key questions immediately present themselves: (a) where did these exceptions come from, and (b) are they three peas in a pod, or are there differences in how one should treat them?

Turning first to the history of the purported abstract idea exception, it is clear that all roads lead to *Benson* (both parties cite to *Benson* via *Bilski*, *Diehr*, and *Flook*, as indeed the Court cited to Benson via *Diehr* and *Flook* in *Bilski*). The key paragraph in *Benson* that introduced so much disruption into modern patent law states:

"The Court stated in *MacKay* [citations omitted for clarity] that '(w)hile a scientific truth, or the mathematical expression of it, is not patentable invention, a novel and useful structure created with the aid of knowledge of scientific truth may be.'

That statement followed the long-standing rule that '(a)n idea of itself is not patentable.' *Rubber-Tip*

Pencil. 'A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right' Le Roy v. Tatham. Phenomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work. As we stated in Funk Bros. Seed Co., 'He who discovers a hitherto unknown phenomenon of nature has no claim to a monopoly of it which the law recognizes. If there is to be invention from such a discovery, it must come from the application of the law of nature to a new and useful end.'7"

This is the core of the abstract idea exception's running amok. Before turning to the cases cited there in the next section, it is helpful to consider that, because of the number of recent cases citing to the same authorities (ultimately the "big three" of Benson, Flook, and Diehr), the statements made in these cases have tended to be cited unquestioningly,

Gottschalk v. Benson, 409 U.S. 63, 67-68, 93 S. Ct. 253, 255, 34 L. Ed. 2d 273 (1972).

and the result is that any error in *Benson* has by now permeated the literature of patent law, as evidenced by the fact that all sides in any §101 dispute (and especially those involving software) start by citing *Bilski* and the big three and the "well-known law" they seem to represent. Note also that the cited passage of *Benson* conflates natural phenomena, laws of nature (and their mathematical representation), and "abstract ideas", which conflation is common in §101 discussions. For example, *Mayo* is cited in the cert-stage briefs in this case, even though *Mayo* was *only* about natural phenomena. Is it appropriate to conflate these three issues? No. The reason why stems from the proper interpretation of §101, which is discussed below.

The Venerable §101 Cases Have Routinely Been Misconstrued—There Is No Abstract Idea Exception

Turning now to the cases cited in *Benson*, we will see that the cases do not support the points in *Benson* for which they were relied upon. The first

case, MacKay Radio⁸, deals with directional radio antennas, and with the natural phenomena exception (which is clear in the case law). Specifically, MacKay Radio states that, while knowledge of the Abraham formula governing how radio waves vary based on the geometry of antennas is not itself patentable, a novel type of antenna that leverages the Abraham formula to achieve a new and useful end (highly directional radio wave transmission) may be (and in fact was).

Rubber-Tip Pencil concerns an invention that today is an everyday item (at least for school children)—the removable rubber eraser that one can place on the end of a pencil. Arguably the case was poorly decided, since the majority in Rubber-Tip Pencil recomposed the claimed invention into its constituent parts, declared that each of them was well-known (even though no one had ever made such erasers before), and then said "What, therefore, is left for this patentee but the idea that if a pencil is inserted into a cavity in a piece of

⁸ Mackay Co. v. Radio Corp., 306 U.S. 86, 94, 59 S.Ct. 427, 431, 83 L.Ed. 506

rubber smaller than itself the rubber will attach itself to the pencil, and when so attached become convenient for use as an eraser?"9 Then, in the final paragraph of the opinion, the author states, "An idea of itself is not patentable, but a new device by which it may be made practically useful is. The idea of this patentee was a good one, but his device to give it effect, though useful, was not new. Consequently he took nothing by his patent".

The opinion, earlier, went to some length to disparage the novelty of each aspect of the invention. So this case was a case of *novelty*, and a poorly executed one at that (the claims as a whole were not examined for novelty, which would have revealed—based at least on the record available today—that in fact the combination of known elements was in fact new, and it was explicitly stated that it was useful). In any case, the citation used in Benson actually works, but not for the purpose it was used for in Benson (as one of the

⁹ Rubber-Tip Pencil Co. v. Howard, 20 Wall. (87 U.S.) 498, 507, 22 L.Ed. 410.

litany of precedents supposedly establishing the abstract idea exception). Rubber-Tip Pencil states that, "an idea of itself is not patentable, but a new device by which it may be made practically useful is". This does not mean necessarily only that a device that makes an idea useful makes patentability possible; it means that an idea, by itself, is not patent-eligible (because ideas don't have any use when they are in our heads), but anything that makes an idea useful may be. We should not be trapped by the fact that, in 1874 when this opinion was written, the vast majority of patents (including those of Morse and Bell) were for mechanical devices with at most some modest involvement of electricity (as in the case of Morse and Bell). The field "electronics" didn't even exist then (in fact, the electron itself was not discovered until much later). So the fact that the word "a device" was used to render "an idea" patent-eligible merely reflects the time, and should never have led us down the path we have taken, where there is an implicit bias in patent law towards tangibility. The key word, and the key concept, in Rubber-Tip Pencil is not "abstract idea" (which was never used), but useful.

Turning now to Le Roy v. Tatham, we note first that again it refers to a natural phenomenon, not an abstract idea. But the passage cited, which states, "That the discovery of a new principle is not patentable; but it must be embodied and brought into operation by machinery, so as to produce a new and useful result", again both suffers from its eraspecific tangibility bias ("embodied", "machine"), but also emphasizes the correct issues ("new and useful", "operative"). That is, an invention, to be patent-eligible, must take a principle and make it operative to provide a new and useful result. But "operative" really just means "useful", for a useful invention either does something or is used to do something—it is operative. A proper reading of Le Roy v. Tatham, in view of the proper interpretation of §101 (discussed below), is only that a principle (a natural phenomenon or law of nature) must be made useful in some new way (the principle itself cannot be new, since Nature predates all patent law).

As an aside, it should be noted that not all "ideas" involve laws of nature or natural phenomena. One can readily create, for example, a completely new algorithm (assume for our purposes that no other person has previously developed the same algorithm, or one that would render it obvious); such an algorithm is neither a "principle" nor a "law of nature". And it is therefore undoubtedly new (since we stipulated that there was no prior art for our hypothetical). But, until it is rendered operable in some way, it is not useful—an idea, in my head (or anyone else's), is just that, and it is not useful. That is the point of *Le Roy v. Tatham*.

Finally, let us consider Funk Bros. as cited in Benson. This also applies to a law of nature (in this case, a newly-discovered law of nature), and states that the law of nature itself is unpatentable (because it is not new), but rather patentability "must come from the application of that law of nature to a new and useful end". This again comports with the text of §101—the law of nature itself preexists patent law and cannot be new. But a new and useful application of the law is deserving of a patent. The key here and with the law of

nature/natural phenomena exceptions in general (which are in essence the same thing) is that the law/phenomenon itself cannot be new (since Nature predates patent law), so to achieve patentability one must develop some new (relative to the prior art, which of course includes the natural law/phenomenon per se) and useful application. But useful does not mean "embodied" or "material"—these are nineteenth century biases. The meaning of useful has not changed, but the march of technology means that the scope of what may be useful certainly has.

This examination—admittedly somewhat lengthy—of the cases cited by *Benson* show that the precedents *do not support the existence of a judicially created abstract idea exception*. It simply isn't there. It was created out of thin air in *Benson*.

§101 Amenable to Clear Interpretation

As hinted above, *amicus* believes the issues surrounding patent eligibility can be disposed of fully merely by properly construing §101 ("Whoever invents or discovers any new and useful process,

machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title") using standard canons of statutory construction. The phrase, "any new and useful process, machine..." means just what it says, and it has always meant that since 1793 (except "art" was changed to "process" in 1952). "Anv" means "any", which means Congress has always intended patent eligibility to be liberally construed. This means the §101 threshold test should be de minimis, checking only to see if the claim in question applies to a machine, a manufacture, a process, or a composition of matter. The law of nature/natural phenomenon exception follows directly from "new"; the only question of novelty to be addressed using §101 is this elimination of things that are clearly only claims to a law of nature or to a natural phenomenon. The issue of "abstract ideas" does not warrant a judicially created doctrine, since an abstract idea by itself is not useful.

Perhaps the most useful outcome that could result from this case is for the Court to reinvigorate the Utility Doctrine of §101, which is rarely used today but which would dispose of this case (in favor of the petitioner) readily. "Useful" should be construed to mean its plain meaning, that is, capable of doing something or being used to do something. An idea by itself can do no more than change a person's mental state (they could accept or reject the idea. or it could give them other ideas). But such "uses" would not comport with the Constitutional framework wherein patent law is to "Promote the Useful Arts". Copyright exists to protect expression, and patent law exists to protect new and useful inventions. It is the Constitutional order of things, and the will of Congress as expressed since 1793, that any new and useful machine, manufacture, process (or "art" before 1952), or composition of matter be given patent protection if it meets the other requirements of the statute.

A helpful example comes from the field where so much economic value is being created today—software engineering. An "abstract class" is a set of code that describes what all objects that belong to classes derived from the abstract class must be able to do, but which does not specify how to implement

and does not enable any of those functions. A "real" class may be derived from an abstract class, and must provide detailed code for how each of the required capabilities of the abstract class will actually be implemented in the real class. Real classes can have instances created; abstract classes cannot. Real classes "do things"; abstract classes do not. This is similar to what the Utility Doctrine of §101 should require. An "idea" by itself does not do anything, and cannot satisfy the Utility Doctrine of §101. A new and useful application of an idea whether embodied in a software process, a machine, or whatever—would pass §101 because it is useful—it can do something or be used to do something whereas the idea itself cannot. That is the end of §101; the analysis then shifts naturally to novelty, obviousness, and the rest of patent law.

Thus a reinvigorated Utility Doctrine of §101 would dispose of this case (and of WildTangent), would eliminate the problematic abstract idea exception, and would explain the natural law/phenomenon exception as in fact not an exception but a mandatory application of the Novelty Doctrine of

Benson and Flook Should Be Overturned

There is more wrong in *Benson* than its creation of a doctrine of an abstract idea exception based on poor reading of precedents. Benson also presents a preemption doctrine, stating that, since the only possible uses of the binary-coded-decimal conversion algorithm claimed was in computers, a claim to a computer would preempt all use of the algorithm and therefore in effect be a patent to an algorithm, which violates the abstract idea exception (which does not in fact exist). But it is plain that, if a person were to invent a physical widget whose only use was to straighten hair, then a patent to the invention would preempt all use of the widget, and thus the idea for the widget itself. There is no difference between the widget preempting the idea for the widget (because it preempts use of the widget in the only field where the widget can possibly be used) and the supposed preemption in Benson (where the idea of the BCD algorithm is preempted because the only use of the algorithm is in computers). Benson did not try to

patent the idea itself; what Benson tried to patent was a method of programming a computer using the new algorithm, which did not exist in Nature previously (there are no natural BCD conversions known to man). There is nothing more or less objectionable about Benson's invention (assuming it was new and nonobvious in view of prior art) than there would be in our hypothetical widget example. Moreover, in the opinion in *Benson* the facts noted in support of the overall direction of the Court that the President's Commission on the Patent System felt that software shouldn't be patentable because "the Patent Office now cannot examine applications for programs because of a lack of a classification technique and the requisite search files..." and because, "it is noted that the creation of programs has undergone substantial and satisfactory growth in the absence of patent protection and that copyright protection for programs is presently available"10. These comments are often cited in the ongoing §101 debate, yet it is clear on the face of it that whether or not the PTO is "ready to examine"

Gottschalk v. Benson, 409 U.S. 63, 72-73, 93 S. Ct. 253, 257-58, 34 L. Ed. 2d 273 (1972)

patent applications for a new technology has precisely zero to do with how courts should treat a case like Benson. Clearly it is the President's concern to ensure the PTO is properly equipped, and Congress' concern to ensure the patent laws are well drafted. These statements by the Court in Benson give the impression that the Court can or should consider reading the tea leaves when considering such cases to determine whether one decision or another will lead to more or less innovation (this is not irrelevant, as many argue today that software patents should be banned because they suppress rather than promote innovation). Clearly the Court's role is to take the law as it is, interpret the statutes using proper canons of statutory interpretation, and then leave it to Congress to act if action is needed (although in this case it likely isn't needed or even desirable; see below).

One consequence of the *recent* and *ill-conceived* abstract idea exception is that the inventions of *Benson* and *Flook* were found unpatentable (because of their abstractness) while that of *Diehr* was found patentable (because it did something

circuit attempts to follow the guidance from this Court. It is true today that an application to a novel technique for efficiently computing displaying the Mandelbrot set (which is not tied to any physical thing) would be unpatentable as drawn to an abstract idea, while one that has the same level of inventiveness and technical depth but displays a heartbeat would be patent-eligible (because it is displaying the condition of a heart—a physical thing—and is thus not abstract). There is nothing useful in this, and much that is disruptive—the long and ongoing series of §101 disputes being only cases in point.

Amicus realizes neither party has suggested it, and that judicial economy argues against it, but as part of setting things aright in this very unsettled area of patent law, not only should §101 properly construed govern and the abstract idea exception be terminated, but the Court might consider overturning Benson and Flook as a consequence of this change.

CONCLUSION

Amicus urges the Court to eliminate the so-called abstract idea exception to §101, explicitly acknowledge that software per se may be patent-eligible if new and non-obvious, and that Benson and Flook are no longer binding precedent.

Respectfully submitted,

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