



# Transnational electronic systems and patent infringement

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..... In *NTP Inc. v. Research In Motion Inc.*, the Federal Circuit (the US court of appeals for all patent cases) took a look at whether operators of transnational electronic systems with some components in the US and some in other countries can be held liable for patent infringement. The *NTP* case involved the defendant, Research In Motion's (RIM's) BlackBerry electronic mail system, which has customers in the US and important parts of the system in Canada.

The problem that this created for NTP, the patentee, was that US patent law ordinarily applies only to patent infringement committed "within the US." As the US Supreme Court explained nearly 150 years ago in the case of *Brown v. Duchesne*, US patent laws "do not, and were not intended to, operate beyond the limits of the United States." Usually this is no problem, because products are normally made, sold, or used either inside the US or outside the US, and processes are normally carried out either inside the US or outside the US. But NTP had claims to Internet communication processes, some of whose steps RIM carried out in Canada (others were performed in the US). Further, RIM's system was located partly in the US and partly in Canada. In particular, the key relay component through which all traffic flowed was located in Canada. (A BlackBerry signal could go from a user in Los Angeles to a user in New York via the BlackBerry relay in Canada.) Thus some of the steps and some of the system com-

ponents (indeed, the central relay component) were Canada-based.

NTP charged RIM with direct infringement, contributory infringement, and active inducement of infringement under sections 271(a), (b), and (c) of the patent law. Direct infringement occurs when a defendant commits the acts of infringement. Contributory infringement occurs when a defendant supplies a third party with parts or equipment that the third party uses to commit direct infringement, to the knowledge of the defendant. Active

inducement of infringement involves urging or actively helping a third party to commit direct infringement. Each of these violations requires that somebody (the defendant or her customer or confederate) commit direct infringement "within the US," as the statute excerpts in Figure 1 list.

The critical words of the patent statute are those requiring that the infringement occur "within the United States." They do not expressly address a situation where only some of the acts that, in the aggregate, constitute infringement or only some



parts of the “patented invention” (here, specifically, the patented thing being “used”) are in the US.

RIM argued that the entire accused system and method must be contained or conducted within the US. The court explained: “RIM thus contends that there can be no direct infringement as a matter of law because the location of RIM’s Relay outside the United States precludes a finding of an infringing act occurring within the United States.” The court disagreed, insofar as the patent claims to a system were concerned, although paradoxically it agreed in regard to the claims for a communications method or process.

The court held that the place where use of a system occurs is “the place at which the system as a whole is put into service, that is, the place where control of the system is exercised and beneficial use of the system obtained.” As for the communications method, the court held that each step must be performed in the US: “[A] process cannot be used ‘within’ the United States as required by section 271(a) unless each of the steps is performed within this country.” Let’s see how those principles lead to conclusions that the system infringed but the method did not.

### A murky distinction: What constitutes “use”?

The court began by asking, “What is use?” It cited Webster’s for the proposition that “the ordinary meaning of ‘use’ is to ‘put into action or service.’” From that it jumped to the further proposition that “the use of a claimed system under section 271(a) is [at] the place at which the system as a whole is put into service, that is, the place where control of the system is exercised and beneficial use of the system obtained.” On this basis, it found it proper to conclude that use of NTP’s patented system “occurred within the United States.” The reason the court gave was that “RIM’s customers located within the United States controlled the transmission of the originated information and also benefited from such an exchange of information.”

The court added that when RIM’s US customers send and receive messages by

#### 35 U.S.C. § 271(a):

... whoever without authority makes, uses, offers to sell, or sells any patented invention, *within the United States* ... infringes the patent.

#### 35 U.S.C. § 271(b):

Whoever actively induces infringement of a patent shall be liable as an infringer.

#### 35 U.S.C. § 271(c):

Whoever offers to sell or sells *within the United States* ... a component of a patented machine, manufacture, combination, or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial non-infringing use, shall be liable as a contributory infringer.

Figure 1. Patent statute on infringement.

manipulating the handheld devices in their possession in the US, the location of the use of the communication system as a whole occurs in the US. This satisfactorily establishes that the situs of the “use” of RIM’s system by RIM’s US customers, for purposes of section 271(a), is the US.

From a pragmatic standpoint, the decision seems to make sense. Holding that to find infringement all elements of a system must be located in the US (or, more generally, in the same country) might mean that many Internet-based systems would not be “used” in any country at all. The BlackBerry is a possible example: Some components of the BlackBerry system are located in the US and some in Canada. Perhaps you could look to the *predominant or most important* elements, but that could be problematic. Yet even if it is pragmatic, the court’s reasoning is questionable.

Why does the court insist that “the place at which the system as a whole is put into service” is the same as “the place where control of the system is exercised and beneficial use of the system obtained”? Neither dictionaries of ordinary usage nor the patent statute require that. Whatever the terms might mean, that the two phrases should equal one another is just an *ex cathedra* (from the throne) assertion by the court. In fact, what does it mean to speak of “the place at which the system *as a whole* is put into service”? A *part* of the system can be “put into service” wherever anyone uses it or its components operate: many different places in Canada and the US. But where is the

“whole” or sum of the parts of the system used? It would seem to be all of those places collectively and no one of them singly. The concept of “the place at which the system as a whole is put into service” does not further our understanding of the issues; it just complicates it and confuses it. Arguably, the phrase and concept have no sensible meaning.

### More murky: US use and control

According to the court, RIM’s customers engaged in US use because they did two things: “RIM’s customers located within the United States *controlled the transmission* of the originated information and also *benefited* from such an exchange of information.” The second theory of use can be rejected out of hand as a legal test. Say I own the stock or all the assets of a company that commits patent infringement in Canada. I benefit financially and otherwise (I am pleased and jollified by its dauntless acts). But that doesn’t mean that I am committing patent infringement in Canada. Or, I use my BlackBerry to e-mail you and offer you a pair of tickets to the World Series if you will come over to my house and pick them up. You sit at your computer and receive the e-mail. You leap up with alacrity, come to my house, get the tickets, and take your dad with you to the game. He is happy. He has benefited. He benefited from the exchange of information that I initiated using my BlackBerry. His benefit is *not* use.

Is the case helped any by control of information transmission? In what sense

## Claiming subsystems: What the courts allow

A transnational system can consist of subsystems, some of which can of necessity be located in one place or at least in one country. There might be, for example, sender or receiver subsystems. It is often possible to obtain patent claims to a subsystem of a given system, where the subsystem is adapted to cooperate or co-act with the system (or the rest of the system). For example, a telephone works only when it cooperates with the rest of a telephone network, but the telephone is nonetheless separately patentable. A toaster won't work unless plugged into a wall socket and power grid, but you aren't obliged to claim a toaster invention together with the wall socket and power grid. Even a device that is otherwise similar to preexisting devices and therefore does not seem novel might be patentable if specially adapted to cooperate with a novel system. For example, you might be able to claim a not-so-novel TV tuner adapted to cooperate with the rest of what is overall a novel TV system—this would be so if the overall combination or system is new and the adaptation makes some change in the tuner from prior similar devices. The Federal Circuit has held that the adaptation of a device to make it work in a particular new setting can patentably distinguish the device from otherwise similar prior art. Thus it is possible that requiring all of a system or subsystem to be in the US for the system or subsystem to be infringed would not doom the invention to loss of patent protection.

does a BlackBerry user control the transmission of the information and thereby "use" the system? The degree of an individual user's control is quite limited. Consider the invention of the bullfight and a patent on the bullfight system. Say that I am a picador. I throw a dart at the bull and it sticks him in the butt. The bull wheels around angrily in response to my action. Do I *control* the bullfight system? Isn't the picador comparable to the BlackBerry user, relative to system control? If the bullring is located half in Nogales, Arizona, and half in Nogales, Mexico, is a picador's transnational toss of the dart the act of controlling the patented bullfight system?

Even real system control is a questionable test. Say you are CEO of a notional "Bugle" and work at its notional main office in Los Angeles. It turns out that the Bugle search engine infringes my Ugandan software patent every time a Ugandan user searches with it. I say you are using my patented system, in Uganda, because you control Bugle. You say, "Nonsense." Who should prevail?

The court's final link in its chain of reasoning on systems was this: "When RIM's United States customers send and receive messages by manipulating the handheld devices in their possession in the United States, the location of the use of the communication system as a whole occurs in the United States. This satisfactorily estab-

lishes that the situs of the 'use' of RIM's system by RIM's United States customers for purposes of section 271(a) is the United States." To that, we may say, "Why?" and, "To whom is it satisfactory?" That "link" in the chain of reasoning is just some more repetition of the court's unexplained legal result. Where are the intervening steps?

Finally, it is not even certain that holding that all claimed elements of a system must be located in the US would mean that transnational Internet-based systems could not be protected effectively under the patent laws, as the "Claiming subsystems: What the courts allow" sidebar explains.

### Murkier still: Opposite results from similar facts

The court's ruling on method or process steps is puzzling because it arrives at the opposite result based on almost identical facts. The court begins by saying that "the concept of 'use' of a patented method or process is *fundamentally different* from the use of a patented system or device." But it does not explain why or how that is so. The Federal Circuit said that it "is well established that a patent for a method or process is not infringed unless all steps or stages of the claimed process are utilized." Therefore, "the use of a process necessarily involves doing or performing each of the steps recited." But it is equally true of

a system that all components must be utilized for infringement to occur, and use of a system could, with equal necessity, be said to require use of each component. To be sure, the court says that use of a process "is unlike use of a system as a whole, in which the components are used collectively, not individually." Why is that so? When a user uses a multicomponent electronic system, a signal is fed to and "uses" the system's front end; the signal then moves to the next stage of the system and "uses" it; and so on, until the signal arrives at the output stage and "uses" it. That is, individual, sequential use of each component or subsystem rather than collective use of the entire system at once. Why not say that (as with the system) this "satisfactorily establishes" that the situs of the use of the method is the US? Does not the US user benefit from the use of the method by controlling the use of the method, just as before? The result of the court's ruling is that systems and processes—although the wording of the claims is not significantly different—receive diametrically opposite treatments.

I once wrote a Micro Law column (*IEEE Micro*, Apr. 1990) showing parallel claims to a process for making a peanut butter sandwich and an apparatus for making a peanut butter sandwich. The point was that a claim to a process for making a peanut butter sandwich was readily convertible into a claim to a machine for making a peanut butter sandwich by a competent drafter of patent claims, and the same diagram illustrated both of them. The same could be said with equal ease as to a claim for a process or a system for performing some electronic task. Indeed, there is no difference between a machine and a system for making peanut butter sandwiches. It therefore seems extremely difficult to make any sense of the Federal Circuit's decision here. As a matter of logic, the result as to the method claims seems to make slightly more sense; as a pragmatic matter, the result for the system claims seems more sound. But the inconsistent results here seem like a fingernail scratching a blackboard.

Where does the decision in the *NTP* case leave us? Unless a further change in

law occurs, a premium has now been placed on writing patents for Internet-based and other transnational inventions more in terms of systems than of methods of carrying out steps or processes. Interestingly, until a short while ago, patent attorneys were using another technique to deal with transnational, Internet-based inventions. The technique was to patent

the signals that users sent across borders, so that making or using the signals occurred in the US. However, the US Patent and Trademark Office (PTO) just recently issued patentability guidelines stating that henceforth no patents should issue on electronic signals, because they are intangible. Therefore, they are not machines, compositions of matter, or arti-

cles of manufacture—one of which the patent statute says they must be to be patented. I'll address this PTO development in a subsequent Micro Law column.

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