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Litigation Alert

Patent Infringement Under Section 271(f) and the Exportation of Software – Living in a Material World

HENRY C. SU

On July 13, 2005, the United States Court of Appeals for the Federal Circuit issued an opinion regarding whether the exportation of software code from the United States for distribution and use in foreign markets constitutes an infringement under U.S. patent law. The case, *AT&T Corp. v. Microsoft Corp.*, considered together with the March 2005 decision in *Eolas Technologies Inc. v. Microsoft Corp.*, sets forth the Federal Circuit's current interpretation of 35 U.S.C. § 271(f), as applied to the exportation of software code.

Under *Eolas* and *AT&T*, the exportation of software code may constitute patent infringement under section 271(f) if the software is deemed to be a "component of a patented invention." For purposes of establishing liability under this statute, these cases suggest that it does not make a difference whether the software is shipped overseas as individual, installation-ready copies or as a master copy that can be used to create installation copies. Nor do these cases permit refuge based on whether the software is shipped in a computer readable memory medium (*e.g.*, a CD-ROM) or transmitted electronically (*e.g.*, by email).

Eolas and *AT&T* should be seen as a wakeup call for the software industry because section 271(f) has long been viewed by some as applicable only to tangible components, *e.g.*, the physical parts of a patented machine. A panel of the Federal Circuit now states that software's intangible nature does not exempt it from coverage under section 271(f). Given that a software program often can be viewed as a "component" of a computer-implemented machine or system or a computer-implemented process, section 271(f) may well come into play frequently, providing an independent basis for a claim of infringement by an owner of a software patent. Software companies defending domestic patent infringement actions will therefore need to consider whether they have exposure arising from the exportation of their software products for distribution and sale abroad.

Furthermore, companies that license software for incorporation into hardware products and systems should consider carefully the scope and limitations of their indemnification provisions. In particular, a hard look should be given to whether the indemnification limits or should limit coverage to domestic sales and excludes or should exclude coverage for claims of infringement based on a combination of the licensed software with other products. Given the increased exposure stemming from *Eolas* and *AT&T*, software licensors and licensees should ensure that their indemnification agreements accurately embody the parties' negotiated allocation of infringement risk.

Section 271(f)

Section 271(f) provides:

(1) Whoever without authority supplies or causes to be supplied in or from the United States all or a substantial portion of the components of a patented invention, where such components are uncombined in whole or in part, in such a manner as to actively induce the combination of such components outside the United States in a manner that would infringe the patent if such combination occurred within the United States shall be liable as an infringer.

(2) Whoever without authority supplies or causes to be supplied in or from the United States any component of a patented invention that is especially made or especially adapted for use in the invention and not a staple article or commodity of commerce suitable for substantial noninfringing use, where such compo-

1 *AT&T Corp. v. Microsoft Corp*. No. 04-1285 (Fed. Cir. July 13, 2005).

2 *Eolas Techs. Inc. v. Microsoft Corp.*, 399 F.3d 1325 (Fed. Cir. 2005). The Federal Circuit denied Microsoft's petition for rehearing and rehearing *en banc* on May 3, 2005.

nent is uncombined in whole or in part, knowing that such component is so made or adapted and intending that such component will be combined outside of the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer.[3]

Congress enacted this provision of the Patent Act in 1984 to close what was then a loophole in the statute that allowed manufacturers of infringing products to escape infringement by manufacturing the unassembled components in the United States and then shipping the components abroad for assembly into products.[4]

The case that triggered this congressional action was *Deepsouth Packing Co. v. Laitram Corp.*,[5] in which an unauthorized manufacturer of a patented machine for de-veining shrimp contrived to avoid an injunction against infringement by manufacturing the parts for the machine in the United States and then shipping them overseas in three separate boxes for easy assembly by its foreign customers. The Supreme Court held in 1972 that this ploy avoided the infringement statute in effect at that time because Deepsouth did not make the patented invention in the United States: "We cannot endorse the view that the 'substantial manufacture of the constituent parts of [a] machine' constitutes direct infringement when we have so often held that a combination patent protects only against the operable assembly of the whole and not the manufacture of its parts."[6]

To abrogate this result, Congress enacted section 271(f), which recognized a new species of patent infringement based on the fact pattern in *Deepsouth*. Subsection (f)(1) defines an act of infringement arising from (a) supply in or from the United States of all or a substantial portion of the components of a patented invention and (b) active inducement of an infringing combination of such components outside of the United States. Subsection (f)(2) defines an act of infringement arising from (a) supply in or from the United States of any component of a patented invention that is knowingly and specially made or adapted for use in the invention and (b) intent that such component will be combined into an infringing combination outside of the United States.

Eolas v. Microsoft

At issue in *Eolas* was Microsoft's Internet Explorer product. Eolas sought to recover damages for Microsoft's foreign sales of its Windows operating system bundled with Internet Explorer. Microsoft argued that Eolas could not capture foreign sales using section 271(f) because its exportation of golden master disks containing the Windows source code did not constitute the supply of a component of an infringing product. The disk was not itself a physical part of any product; rather, foreign original equipment manufacturers used the disks to copy the Windows code onto computer hard drives that were then sold outside the United States.

Both the district court and the Federal Circuit rejected Microsoft's argument, holding that the code contained on the master disks was itself a "component of a patented invention" within the purview of section 271(f)(1). Writing for the panel, Judge Rader construed a "patented invention" under section 271(f)(1) to encompass any invention patentable under the Patent Act, which would include computer-implemented processes and computer program products. Even though the "patented invention" in Deepsouth's case was a machine, the court reasoned, Congress clearly did not limit the statute's application to just patented machines.

Judge Rader then reasoned that if a computer program product is a "patented invention," then the computer readable program code (as claimed in claim 6 of the Eolas patent-in-suit) is a "component" thereof.[7] Under this reading of section 271(f)(1), the Windows code that can be copied from a master disk onto a hard drive "is not only a component, it is probably the key part of this patented invention" because it functions "as an operating element of the ultimate device."[8] Judge Rader readily dismissed the suggestion that the application of section 271(f)(1) should be limited to physical components of machines and other structural combinations. The court noted that the plain language of the statute simply does not support such

3 35 U.S.C. § 271(f) (2005). *Eolas* focused only on section 271(f)(1) whereas *AT&T* construed both subsections (f)(1) and (f)(2).

4 P.L. 98-622, Title I, § 101(a), 98 Stat. 3383 (Nov. 8, 1984).

5 406 U.S. 518 (1972).

6 *Id*. at 528.

7 The patented invention in *Eolas* is a browser that can be used in a fully interactive environment (e.g., viewing news clips or playing games on the Internet).

8 *Eolas*, 399 F.3d at 1339.

a reading—that a "component of a patented invention" must be tangible. Moreover, software and hardware are "practically interchangeable in the field of computer technology" because in a functioning computing machine, "software converts its functioning code into hardware and vice versa."[9]

AT&T v. Microsoft

In *AT&T*, Microsoft again argued that section 271(f) did not apply to its exportation of golden master disks containing the Windows source code to be replicated abroad. The Federal Circuit again upheld the application of section 271(f) to the exportation of Microsoft's Windows code for assembly and use abroad, although this time Judge Rader dissented.

Microsoft had already lost the argument that its Windows software could not be a "component of a patented invention" under section 271(f).[10] However, it argued in the alternative that even if Windows were a component, no such components were "supplied in or from the United States" because the copies of the Windows program that were actually installed on the computers assembled abroad had themselves been made abroad by licensed foreign replicators. Judge Lourie, writing for the panel, focused his opinion on the infirmities of Microsoft's second argument.

Judge Lourie decided that the word "supplied" in the statute must be construed in accordance with "its 'ordinary, contemporary, common meaning,' which is necessarily context-dependent."[11] In other words, in the context of software distribution, one must consider how software is typically supplied. The court held that software is typically distributed by providing one copy from which multiple copies can be made. "Accordingly, for software 'components,' the act of copying is subsumed in the act of 'supplying,' such that sending a single copy abroad with the intent that it be replicated invokes § 271(f) liability for those foreign-made copies."[12] In Judge Lourie's view, Microsoft cannot read the statute to exclude what is clearly an efficient and expedient method of distributing software—sending one master copy for subsequent replication instead of sending a separate disk for each copy to be sold overseas.

The court also rejected Microsoft's argument that the result would be any different if the Windows code were sent by electronic transmission instead of by shipment on a golden master disk. The disk is simply a container for transporting the component; all that matters is that the component in question—in this case, software code—has been exported. Because the software is intangible, it lends itself to an alternative medium for exportation not available to physical components, namely electronic transmission. But the end result is the same: an exportation of a component of a patented invention in violation of section 271(f).

Judge Lourie concluded by pointing out that section 271(f)'s remedial nature justifies a liberal reading that captures Microsoft's exportation of the Windows code. The court cannot "[permit] a technical avoidance of the statute by ignoring the advances in a field of technology—and its associated industry practices—that developed after the enactment of § 271(f). It would be unsound to construe a statutory provision that was originally enacted to encourage advances in technology by closing a loophole, in a manner that allows the very advances in technology thus encouraged to subvert that intent."[13] Nor can the court be concerned with "Microsoft's impassioned recitation of a parade of horribles that may befall the domestic software industry—such as the relocation of manufacturing facilities overseas[.]"[14]

Judge Rader's Dissent.

Ironically, Judge Rader, who wrote the *Eolas* decision, disagreed with the holding in *AT&T*—that the mere exportation of a single, master copy that is then used to make multiple installation copies of a software program violates section 271(f). His disagreement with the majority centered on the meaning of "supplied," which he interpreted to mean something other than an act of "copying," "replicating" or "reproducing." In his view, "one cannot supply one hundred components of a patented invention without first making

9 *Id.*

10 The patented invention in *AT&T* is a speech codec, a software program that encodes a speech signal into a more compact form for transmission and then decodes the signal back into its original form.

11 *AT&T,* slip op. at 5.

12 *Id.*

13 *Id.* at 8-9.

14 *Id.* at 9

one hundred copies of the component, regardless of whether the components supplied are physical parts or intangible software."[15] In other words, "supplying" components for assembly abroad presupposes that the requisite number of copies has already been manufactured and been present in the United States for sale or exportation.

Judge Rader thus chastised the majority for doing exactly what one is not supposed to do when construing and applying the Patent Act—enforcing it in a discriminatory manner against software as a distinct field of technology. The fact that software is easier to make and transport does not justify a special definition of "supplying" that encompasses a subsequent act of making more copies abroad from a single master supplied from the United States. Were the component in question a physical part, section 271(f) could not be read to capture 100 copies of the part that had been manufactured abroad. Only those copies that had been manufactured and then "supplied in or from the United States" would fall within the statute.

In Judge Rader's view, the majority has improperly imbued the Patent Act with extraterritorial reach over manufacturing or copying activities occurring wholly abroad. "Section 271(f) protects foreign markets from domestic competitors. Section 271(f) does not, or at least did not until today, protect foreign markets from foreign competitors."[16] The latter protection should come from foreign patents.

Limitations to *Eolas* and *AT&T*? Consider *Pellegrini*

A 2004 Federal Circuit decision that Microsoft cited in support of its argument in both *Eolas* and *AT&T*, albeit unsuccessfully, does appear to set some outer boundaries for liability under section 271(f)(1). *Pellegrini v. Analog Devices, Inc.*[17] concerned the alleged infringement of Pellegrini's patented brushless motor drive circuits by the combination of Analog's integrated circuit chips with other components for brushless motors. Pellegrini invoked section 271(f)(1) as the basis for Analog's infringement.

The problem with Pellegrini's theory was that Analog's chips (the supplied components of the patented invention) were manufactured exclusively outside the United States (in Ireland and Taiwan) and were never shipped to or from the United States. Accordingly, the chips were never physically present in the United States such that they could be said to be "supplied in or from the United States." Judge Lourie, writing for the panel that also included Judge Rader, held that section 271(f)(1) "applies only where components of a patent invention are physically present in the United States and then either sold or exported 'in such a manner as to actively induce the combination of such components outside the United States in a manner that would infringe the patent if such combination occurred within the United States.'"[18]

The fact that Analog is headquartered in the United States, conceives and designs the chips in the United States, and supervises from the United States the overseas fabrication, assembly, testing, marketing, sale and shipment of the chips does not change this conclusion. "The plain language of § 271(f)(1) focuses on the location of the accused components, not the accused infringer."[19] Moreover, the statute's use of the term "supplied" "clearly refers to physical supply of components, not simply to the supply of instructions or corporate oversight."[20]

Pellegrini thus allows a line to be drawn between the supply of a "component," whether tangible or intangible, and the supply of instructions. It raises the question whether the transmission of an integrated circuit design (e.g., in the form of RTL code) for manufacturing use overseas would constitute infringement under section 271(f). If the finished integrated circuit itself is the "component" in question, then the mere provision of design specifications for such a circuit might not be viewed as supplying a component of a patented invention in or from the United States.

15 *Id.*, slip op. (Rader, J., dissenting) at 3.

16 *Id.* at 8.

17 *Pellegrini v. Analog Devices, Inc.*, 375 F.3d 1113 (Fed. Cir.), cert. denied, 125 S. Ct. 642 (2004).

18 *Id.* at 1117.

19 *Id.*