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JOINT INFRINGEMENT OF PATENT CLAIMS: ADVICE FOR PATENTEEES

Sriranga Veeraraghavan†

Abstract

Liability for direct patent infringement generally requires the presence of an entity that directly infringes all the limitations in a patent claim. But, in some situations a single direct infringer may not be present. There are two judicially developed theories of joint infringement that address such situations: the "agency" theory and the "some connection" theory. This article explores both theories and provides some practical advice for patentees who need to avail themselves of one or both joint infringement theories.

† J.D. Candidate (2007), Santa Clara University School of Law. I wish to thank William P. Nelson for suggesting this topic and helping to develop the ideas presented.
I. INTRODUCTION

In order to establish liability for direct patent infringement under 35 U.S.C. § 271(a), a patentee must show either that an infringing product contains all the limitations in the allegedly infringed patent claim or that an infringer performs each and every claimed step of the patented process. This requirement does not generally present a problem to most patentees because the patentee knows the identity of the entity that is making, using, selling, offering to sell or importing the claimed invention. But, there are two situations in which a single direct infringer may not be present. First, the patentee’s competitors may have arranged their affairs so that no one entity infringes every claim limitation or process step. Second, a patentee’s method claims may have been drafted such that different entities must perform different steps. In this case, a patentee will need to impute the actions of one or more entities to one particular entity in order to show that every process step is infringed. A patentee in these situations may

2. This is the well-known “all-limitations” rule. Laitram Corp. v. Rexnord, Inc., 939 F.2d 1533, 1535 (Fed. Cir. 1991) (“To establish infringement, every limitation set forth in a patent claim must be found in an accused product or process exactly or by a substantial equivalent.”).
3. The issue of joint infringement sometimes arises as a defense; an accused infringer will argue that it cannot be held liable as a direct infringer because its products do not contain all the limitations of the asserted patent claim or it does not perform every step in a claimed process. For example, the defendant in Avery Dennison Corp. v. UBC Films PLC., made this very argument. See Avery Dennison Corp. v. UBC Films PLC., No. 95 C 6351, 1997 U.S. Dist LEXIS 13594, at *4 (N.D. Ill. Sept. 3, 1997).
4. Suppose that a patentee has a process claim comprised of steps 1, 2 and 3. Also suppose that “infringer” X performs only steps 2 and 3, but hires Y to perform step 1. Since neither X nor Y perform all three steps as required by the claim they cannot be considered direct infringers. An illustration of this situation can be found in Metal Film Co. v. Melton Co., 316 F. Supp. 96 (S.D.N.Y. 1970). In Metal Film, the infringer contracted with a third party to perform one of the steps in a patented process. Id. at 110 n.12.
5. Claims that require one entity to perform certain steps and another entity to perform other steps are sometimes referred to as “divided” or “distributed” claims. See Mark A. Lemley et. al., Divided Infringement Claims, Stanford Public Law Working Paper No. 100, at 1 (Dec. 1, 2004). available at http://ssm.com/abstract=628241. Divided claims are often present in Internet based inventions. For example, in Hill v. Amazon, an asserted claim required some steps to be performed on a “main computer” controlled by one party while others had to be performed on a “remote computer” controlled by a different party. Hill v. Amazon.com, Inc., No. 2:02-CV-186, 2006 U.S. Dist. LEXIS 3389, at *14-15 (E.D. Tex. Jan. 19, 2006).
6. For example, in Hill, the plaintiff’s claims were drafted in a way that required the primary entity to perform some steps on its computer and then transmit the result to the secondary entity that performed several more steps before returning a result to the primary entity’s computer. Id. at *13-14. Since neither the primary entity nor the secondary entity performed every step in the claimed invention, the plaintiff needed to resort to a theory that
want to avail itself of a theory of indirect infringement by arguing that the entity is either actively inducing another to infringe or is contributing to another's infringement. Although these theories may seem appealing, a patentee cannot resort to them unless it shows that a direct infringer is present because direct infringement is considered a prerequisite for establishing liability under both indirect infringement theories.\footnote{Joy Techs. v. Flakt, Inc., 6 F.3d 770, 774 (Fed. Cir. 1993) ("[A]ctive inducement of infringement or for contributory infringement is dependent upon the existence of direct infringement . . . . Thus, either form . . . cannot occur without an ac of direct infringement.").}

But, a patentee is not without recourse because of two judicially developed theories of joint infringement: the "agency" theory and the "some connection" theory. The "agency" theory was first recognized in the 1940s, while the "some connection" theory is a much more recent judicial development. The "some connection" theory reduces the traditional agency law focus on control and allows enforcement against a broader range of infringing activities. In a pair of recent cases the Court of Appeals for the Federal Circuit ("CAFC") has expressed support an expansive view of joint infringement. This article examines the key district court cases that discuss these theories and the related CAFC jurisprudence. The article concludes with some advice for patentees who need to avail themselves of a joint infringement theory. Generally, a patentee will be able to rely on the "agency" theory, as most courts are comfortable applying agency principals and determine factual questions related to the extent of "control." But, a patentee should be able to convince a court to adopt the "some connection" theory given the recent jurisprudence surrounding that theory.

\footnote{See Crowell v. Baker Oil Tools, Inc., 143 F.2d 1003 (9th Cir. 1944).}


\footnote{See Pellegrini v. Analog Devices, Inc., 375 F.3d 1113, 1118 (Fed. Cir. 2004); On Demand Mach. Corp. v. Ingram Indus. (ODMC), 442 F.3d 1331, 1344-45 (Fed. Cir. 2006).}
II. THE "AGENCY" THEORY OF JOINT INFRINGEMENT

The "agency" theory of joint infringement is a combination of two common law principles. The first principle is that patent infringement can be considered as a type of tort. The second principle, from agency law, is that a master or principal may be liable for his servant or agent's torts. Given that the hallmark of an agency relationship is "control or right of control," courts applying the "agency" theory appropriately focus on the level of control exercised by one infringing entity over the other infringing entities. This focus on control is apparent from the very first case to recognize the "agency theory," Crowell v. Baker Oil Tools. Since Crowell, two major cases have clarified the scope of the "agency" theory. In addition, the CAFC recently expressed approval for the "agency" theory. This section discusses these, and other related cases.


Crowell, the first reported case to adopt the "agency" theory, involved the unusual situation where the potential infringer was trying to show that an agency relationship existed between him and the other infringing entities. In Crowell, the defendant, Baker Oil Tools, Inc. ("Baker") held a patent for a "floating and cementing device for well casings." Crowell, the plaintiff, was a Baker competitor who wanted to start making the same device. In order to commence his operations without fear of being enjoined for patent infringement, Crowell brought a declaratory relief action to have Baker's patent declared invalid. By the time Crowell filed for declaratory relief, he had reached an "understanding" with an external vendor, under which

15. See Mobil Oil Corp. v. Fitrol Corp., 501 F.2d 282, 291-92 (9th Cir. 1974) ("We question whether a method claim can be infringed when two separate entities perform different operations and neither has control of the other's activities.").
20. Id. at 1003.
21. Id. at 1004.
22. Id. at 1003.
the vendor would stockpile a large amount of the materials Crowell needed to create infringing devices.23

Baker resisted Crowell's action by arguing that no actual controversy existed.24 The District Court agreed and dismissed the action on the grounds that (1) Crowell did not manufacture an infringing product; (2) Crowell had no employees who manufactured an infringing product for him; and (3) Crowell did not have a written or oral contract with the independent contractor for the manufacture of an infringing product.25

Implicit in the District Court's holding is the idea that agency principles could be applied to patent infringement. The District Court seems to have accepted, without difficulty, the idea that if Crowell had an agency relationship characterized by an employment agreement or a contract, that agent's actions could be imputed to Crowell. But, the District Court does not seem to have recognized that the important aspect of any agency relationship is the level of control, rather than the presence of a formal agreement.26 The importance of control, however, was not lost with the Court of Appeals for the Ninth Circuit ("Ninth Circuit"), which reversed and reinstated the action.27 The Ninth Circuit held that it was "obvious that one may infringe a patent if he employ[s] an agent for that purpose or [if he] ha[s] the offending articles manufactured for him by an independent contractor."28 The key fact for the Ninth Circuit seems to have been that Crowell was able to convince an outside vendor to stockpile the materials necessary for him to build infringing devices in volume, even without a written agreement.29 It is hard to imagine why an outside vendor would spend its own money to purchase supplies for Crowell to build potentially infringing devices, unless some sort of control existed.

B. Applying Crowell

The first major application of Crowell occurred in Metal Film Co. v. Metlon Co.30 In Metal Film, the plaintiff, Metal Film Co.
("Metal Film"), sued Metlon Co. ("Metlon") for infringing its patented four-step process for producing metallized yarn.\textsuperscript{31} The problem faced by Metal Film was that Metlon used an outside supplier to perform the first step in the process.\textsuperscript{32} Metlon argued that since it only performed the last three steps of Metal Film’s patented process, it was not a direct infringer.\textsuperscript{33} The District Court applied Crowell and rejected this argument, holding that an infringer could not “mitigate [its] infringement of the overall process” by simply choosing to have an outside vendor perform one step in the process.\textsuperscript{34} This very language formed the basis for the decision in Shields v. Halliburton Co.\textsuperscript{35} In Shields, the plaintiff, Shields, had a patented process for grouting offshore oilrigs.\textsuperscript{36} Shields sued Halliburton Co. ("Halliburton") on the basis that Halliburton had infringed this process on four different grouting jobs.\textsuperscript{37} On two of these jobs, employees from another company assisted Halliburton in performing the processes steps.\textsuperscript{38} The District Court held that Halliburton could not avoid direct infringement for those two jobs just because “another [entity] perform[ed] one step of the process.”\textsuperscript{39}

Although both Metal Film and Shields involved situations in which only one patent step was performed by outside vendors, it is unlikely that a court would limit these cases to only such situations. Since the “agency” theory focuses on control as the basis for the imputation of acts, it should not matter that an agent performed multiple infringing steps, instead of just one, as long as control can be shown. This is apparent from the Ninth Circuit’s holding in Mobil Oil Corp. v. Fitrol Corp., which highlights control as the main factor for establishing that an agency relationship exists.\textsuperscript{40} In Fitrol, Mobil Oil Corp. ("Mobil") argued that the defendants, Fitrol Corp. ("Fitrol") and Texaco, Inc. ("Texaco"), were both direct infringers because they had split the performance of Mobil’s patented process between

\textsuperscript{31} Id. at 97, 100.
\textsuperscript{32} Id. at 110 n.12.
\textsuperscript{33} Id.
\textsuperscript{34} Id. The District Court did not have any difficulty in treating the outside supplier as Metlon’s agent because there was evidence that Metlon and its outside supplier were “closely related companies.” Id. at 109 n.11.
\textsuperscript{36} Id. at 1378-81.
\textsuperscript{37} Id. at 1388. The District Court dismissed the action with respect to one job because evidence of infringement was “inconclusive.”
\textsuperscript{38} Id.
\textsuperscript{39} Id. at 1389 (citing Metal Film Co. v. Milton Corp., 316 F. Supp. 96 (S.D.N.Y. 1970)).
\textsuperscript{40} Mobil Oil Corp. v. Fitrol Corp., 501 F.2d 282, 291-92 (9th Cir. 1974).
them. Although Fitrol and Texaco had performed different steps of Mobil's patented process, Mobil had not shown that Fitrol controlled Texaco's actions, or visa versa. The Ninth Circuit refused to find liability for joint infringement stating that it "question[ed] whether a method claim can be infringed [by] two separate entities . . . [where] neither has control of the other's activities." As the absence of a showing of any control, in the Ninth Circuit's mind, foreclosed the application of the "agency" theory, a prudent patentee who employs the "agency" theory should try to develop some evidence tending to show control of one infringing entity by another entity.

C. Expanding the "agency" theory – Mobil Oil Corp. v. W.R. Grace & Co.

The first major expansion of the "agency" theory occurred in W.R. Grace, wherein the theory was extended to cover customers, under certain circumstances. In W.R. Grace, the plaintiff, Mobil, sued W.R. Grace & Co. ("W.R. Grace") for infringing Mobil's patents related to "gas oil cracking catalysts." W.R. Grace used the specifications in Mobil's patent to partially manufacture catalysts, but W.R. Grace did not perform the final steps needed to complete the manufacture. W.R. Grace's customers performed those when they used the catalysts.

The District Court held that W.R. Grace directly infringed Mobil's patents because W.R. Grace effectively "made each of its customers its agent in completing the infringement step." The court reached this conclusion for two reasons. First, the court found that W.R. Grace knew that the remaining steps would be "promptly and fully completed" by its customers. Second, the court did not want to allow W.R. Grace to "achieve all of the benefits described by the

41. Id. at 291.
42. Id.
43. Id. at 291-92.
45. Id. at 211-12, 251-53.
46. Id. at 211.
47. Id. at 253.
48. Id.
49. Id.
51. Id.
patents" without incurring the expense of performing the complete manufacture.\textsuperscript{52}

The \textit{W.R. Grace} court's view of who can be an agent for the purposes of patent infringement is much broader than the traditional view expressed in \textit{Crowell} because sellers are not generally considered to exercise a great deal of control over buyers of roughly the same sophistication. But under the \textit{W.R. Grace} view, showing that the infringer sold its product knowing that its customers would complete the remaining steps, is sufficient to demonstrate control. The \textit{W.R. Grace} decision may be based on the recognition that there is an economic incentive in pushing the performance of some patent steps to one's customers. The court may have wished to preemptively stamp out this type of conduct and accordingly extended "agency" theory in order to do so.

\textbf{D. Limiting the expansion of the "agency" theory – E.I. DuPont de Nemours & Co. v. Monsanto Co.}\textsuperscript{53}

The \textit{E.I. DuPont} decision is a significant "agency" theory case because it established the minimum threshold for who could be considered a direct infringer.\textsuperscript{54} In \textit{E.I. DuPont}, Monsanto Co. ("Monsanto"), the plaintiff, had patented a process for making stain-resistant carpet fibers.\textsuperscript{55} Monsanto sued E.I. DuPont de Nemours & Co. ("DuPont") for infringing this process.\textsuperscript{56} DuPont counterclaimed, arguing that Monsanto infringed a similar process patented by DuPont.\textsuperscript{57}

The problem for DuPont was that Monsanto only performed the first step in its process.\textsuperscript{58} Monsanto sold the results to customers who performed the remaining steps of DuPont's patented process.\textsuperscript{59} The District Court rejected DuPont's argument that Monsanto was the direct infringer.\textsuperscript{60} Instead, the District Court found that Monsanto's customers were the direct infringers because they performed all but one step in DuPont's patented process and used Monsanto as their

\begin{itemize}
\item \textsuperscript{52} \textit{Id.}
\item \textsuperscript{54} \textit{Id.} at 735.
\item \textsuperscript{55} \textit{Id.} at 688-90.
\item \textsuperscript{56} \textit{Id.} at 688.
\item \textsuperscript{57} \textit{Id.}
\item \textsuperscript{58} \textit{Id.} at 733-34.
\item \textsuperscript{60} \textit{Id.} at 735.
\end{itemize}
agent for the performance of the first step. In reaching this conclusion, District Court found that it could not interpret Crowell, Metal Film Co. and Shields as allowing a “third party who performs [only] one step of a patented process and then sells the resulting product” to be held liable as a direct infringer. While this holding does represent a limitation on the extent of the “agency” theory, it comes with a silver lining; since the District Court found that Monsanto’s customers were direct infringers, the District Court had no difficulty in holding Monsanto liable for indirect infringement.

For patentees, this highlights the importance of finding at least one direct infringer, even if it is not economically viable to sue that direct infringer. By using the “agency” theory, the patentee can impute the actions of different entities to a single entity and treat that entity as the direct infringer. After demonstrating the existence of a direct infringer, the patentee can then resort to the two indirect infringement theories, active inducement and contributory infringement, in order to hold the “real” infringer liable, just as DuPont was able to hold Monsanto liable.

In addition to clarifying the limits on the “agency” theory, the E.I. DuPont decision is also significant because its reasoning sheds light on the rationale behind the confusing CAFC’s decision in Fromson v. Advance Offset Plate, Inc. In Fromson, the plaintiff, Fromson, sued a competitor, Advance Offset Plate, Inc. (“Advance”), for direct and indirect infringement based on the actions of Advance’s customers. Fromson held a patent on a photographic printing that was specially treated so that it formed an aluminum oxide coating on its surface. Fromson’s claims included a method for making such plates. One of the steps in Fromson’s patented method involved the

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61. Id.
62. Id.
63. Id. at 737. Specifically, the District Court found that there was sufficient evidence to show that Monsanto actively induced its customers to infringe. Id. at 737-38. To establish liability for active inducement, the patentee must show that an entity that directly infringes is present and that the defendant knowingly aided and abetted the infringement. Id. at 736. Having found that Monsanto’s customers were direct infringers, the District Court found that there was sufficient evidence to show that Monsanto induced this infringement by providing support to its customers in their infringing activities even after it had knowledge of DuPont’s patent. Id. at 737-38.
65. Id. at 1567-68. In terms of indirect infringement, Fromson argued that Advance was liable for contributory infringement. Id.
66. Id. at 1567.
67. Id. at 1568.
application of a coating to the plate. 68 Advance manufactured photographic plates, but did not apply the coating to the plate. 69 Instead, Advance’s customers applied the necessary coating. 70 Although one would expect a discussion of joint infringement given this factual scenario, no such discussion is present in the Fromson decision. The CAFC simply notes that although Advance cannot be held liable for direct infringement, it can nevertheless be held liable for indirect infringement. 71

In light of E.I. DuPont, the rationale behind the CAFC’s conclusion becomes clearer. Like Monsanto, Advance was not a direct infringer because it performed very few of the patented steps. 72 But, just like Monsanto, Advance’s customers did perform the missing steps. 73 Thus, Advance’s customers could be considered the direct infringers, just as Monsanto’s customers were considered the direct infringers. Because of this, Fromson could hold Advance liable for indirect infringement. Although this could be characterized as a post-hoc rationalization of the Fromson decision, the close alignment of the Fromson facts with the E.I. DuPont facts suggests that Fromson may have based on the CAFC’s implicit acceptance of the principles associated with the “agency” theory.

E. The CAFC addresses the “agency” theory – Pellegrini v. Analog Devices, Inc. 74

In Pellegrini the CAFC directly addressed the “agency” theory of joint infringement and seemingly approved of the theory. 75 But, the problem with Pellegrini is that, although the CAFC approved of the “agency” as conceived in Crowell, the CAFC’s decision did not actually rely on the “agency” theory. 76

68. Id.
69. Fromson, 720 F.2d at 1567-68.
70. Id. at 1568.
71. Id. at 1568. Specifically, the CAFC found that Advance could be held liable for contributory infringement. Id.
72. Id. at 1567-68.
73. Id.
75. Id. at 1118 (“Pellegrini’s statement is correct insofar as Crowell held that one cannot escape liability for infringement as a manufacturer of infringing products simply by employing an agent or independent contractor to carry out the actual physical manufacturing.”).
76. Id. at 1113, 1117-18.
In *Pellegrini*, the plaintiff, Pellegrini, owned a patent for brushless motor drive circuits. Pellegrini sued Analog Devices, Inc. ("Analog"), for direct and indirect infringement and indirect. The problem faced by Pellegrini was that although Analog was a United States corporation, almost all of the infringing products manufactured and sold by Analog were manufactured and sold outside the United States. Pellegrini tried to argue that Analog was a direct infringer under 35 U.S.C. § 271(f)(1) because Analog’s headquarters were located in the United States and it provided instructions to overseas vendors from the United States. The District Court rejected this argument and entered judgment in Analog’s favor on the basis that United States patent law could not be applied extraterritorially. Pellegrini appealed this decision.

On appeal before the CAFC, Pellegrini argued that Analog was a direct infringer because the actions of its overseas contractors should be imputed to Analog under the *Crowell* "agency" theory. The CAFC agreed with Pellegrini that the "agency" theory did not allow a manufacturer to escape liability for direct infringement by employing an agent or an independent contractor to manufacture an infringing product. But, the CAFC held that nothing in *Crowell* implied that the "agency" theory could be applied to cover actions outside the United States. Since Pellegrini could not show that Analog or its agents committed any infringing acts in the United States, the CAFC affirmed the lower court’s decision.

The *Pellegrini* decision is both positive and negative for patentees who wish to proceed under the "agency" theory of joint infringement. The decision is positive for patentees because expressed approval of the *Crowell* "agency" theory. The decision is a negative because it imposes a territorially limit on the "agency" theory: any

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77. *Id.* at 1114.
78. *Id.* In terms of indirect infringement, Pellegrini argued that Analog was actively inducing third parties to infringe his patent. *Id.*
79. *Id.* at 1115.
81. *Pellegrini*, 375 F.3d at 1115. Under § 271(f)(1), a direct infringer is the entity that supplies the infringing product in the United States or causes the infringing product to be supplied from the United States.
82. *Id.* at 1113, 1115, 1119.
83. *Id.* at 1115.
84. *Id.* at 1118.
85. *Id.*
86. *Id.*
87. *Id.* at 1119.
infringing actions by agents must happen within the United States. Although Pellegrini was decided in the context of § 271(f)(1), the extraterritoriality limitation will likely apply to direct infringement under § 271(a) as well because § 271(a) is also limited to actions within the United States. 

III. THE "SOME CONNECTION" THEORY OF JOINT INFRINGEMENT

Although the "agency" theory appears adequate to cover situations where multiple infringers are involved, the theory is still based requires a showing of some control over an agent's actions. The "some connection" theory expands the "agency" theory and allows a patentee to establish direct infringement by showing that "some connection" exists between the infringing entities. Although, as discussed below, some courts continue to state that the focus is on control, the level of control that suffices is usually much lower than what is required under the "agency" theory.

The "some connection" theory was first recognized in Faroudja Laboratories v. Dwin Electronics. The main cases that have applied this theory are Cordis v. Medtronic Ave; Marley Mouldings v. Mikron Industries, Inc.; Hill v. Amazon.com, Inc.; and BMC Resources, Inc. v. Paymentech. In addition, the CAFC recently expressed approval for an expansive jury instruction for joint infringement in On Demand Machine Corp. v. Ingram Industries (ODMC). Based on the cases discussed below, it appears that district courts in California, Delaware, Illinois, Maryland, New York and Texas are comfortable applying the "some connection" theory.

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88. § 271(a) only applies to unauthorized manufacture, use, offers to sell or sales "within the United States" or imports "into the United States." See also NTP, Inc. v. Research in Motion, Ltd., 418 F.3d 1282, 1318 (Fed. Cir. 2005).


90. Id.


95. On Demand Mach. Corp. v. Ingram Indus., Inc. (ODMC), 442 F.3d 1331 (Fed. Cir. 2006).
After ODMC, more district courts may be willing to apply the theory.  

A. Origins of the “some connection” theory – Faroudja Laboratories, Inc. v. Dwin Electronics, Inc. 

Faroudja was the first case to recognize that “some connection,” rather than an “agency” relationship characterized by control, might be enough to establish direct infringement. In Faroudja, the plaintiff, Faroudja Laboratories, Inc. (“Faroudja”), sued Dwin Electronics, Inc. (“Dwin”) for direct and indirect infringement of its patented method and apparatus for improving the image quality of television signals derived from films. Faroudja’s patented method and apparatus depended on a means for converting film frames into a television signal. Dwin argued that it did not directly infringe either the method or apparatus claims in Faroudja’s patents because its products did not incorporate any means for converting film frames into television signals. The District Court agreed with Dwin and granted its motion for summary judgment.

With respect to direct infringement of the apparatus claims, the District Court reasoned that Faroudja could not show that every limitation in its patent could be found in Dwin’s products. In terms of indirect infringement, Faroudja had tried to argue that Dwin’s customers were direct infringers because they completed the necessary steps by purchasing or renting films that were converted to a television signal. The court disagreed with Faroudja. After reviewing prior case law regarding joint infringement, the court concluded that direct infringement required a showing that “some connection [existed] between the different [infringing] entities.” In

96. But at least one District Court has already refused to apply ODMC on the basis that the CAFC’s approval of the “some connection” theory was dicta. BMC Res., Inc. v. Paymentech, No. 3:03-CV-1927-M, 2006 U.S. Dist. LEXIS 37746, *11 n.3 (N.D. Tex. May 24, 2006).
98. Id. at *2. Faroudja argued that Dwin was liable for indirect infringement under both an active inducement theory and a contributory infringement theory. Id.
99. Id. at *5.
100. Id. at *12.
101. Id. at *23.
103. Id. at *17.
104. Id. at *18.
105. Id. at *15.
addition, the court held that "some connection" could be shown where the entities "worked in concert . . . to complete the process" or were in "direct contact." Although the District Court adopted this expansive standard, it still refused to find that "some connection" existed between Dwin and its customers, sufficient to treat the customers as direct infringers, merely because they bought a product from Dwin. Since Faroudja could not establish direct infringement, the District Court held that Dwin could not be held liable for indirect infringement either.

B. Applying Faroudja

Cordis Corp. v. Medtronic Ave, Inc. was the first reported case to find liability for direct infringement under the "some connection" theory. In Cordis, the plaintiff, Cordis Corp. ("Cordis"), held patents covering balloon expandable stents and methods of using those stents. Cordis sued Medtronic Ave, Inc. ("Medtronic") and Boston Scientific Corp. ("BSC") alleging that they infringed both the apparatus and method claims in Cordis's patents. With respect to the method claims, the defendants argued that they were not direct infringers because (1) independent physicians performed some of the claimed steps and (2) no connection existed between them and the physicians except for the sale of the stents, which, as the Faroudja decision noted, was insufficient to support a finding that "some connection" existed between the infringing entities.

In affirming the jury's determination that Cordis' method and apparatus claims were infringed, the court found that Cordis had presented sufficient evidence to support the jury's determination that "some connection" existed between the defendants and the physicians. The court concluded that the jury could have found "some connection" for four reasons. First, the court noted that the

106. Id. at *17, *19.
108. Id. at *22.
111. Id.
112. Id. at 349.
113. Id. at 350.
defendants taught the physicians how and when to use the infringing stents.\textsuperscript{115} Second, the court pointed out that the defendants sent sample stents to the physicians.\textsuperscript{116} Third, the court noted that the defendants recruited physicians for clinical trials.\textsuperscript{117} Finally, the court noted that the defendants talked to thousands of physicians who used the stents on a daily basis.\textsuperscript{118}

The type of evidence that Cordis was able to use in order to show a connection between the physicians and the defendants illustrates the power of the "some connection" theory, as compared to the "agency" theory. It is unclear that the "agency" theory, even the expanded \textit{W.R. Grace} version, could cover a situation in which doctors, who were not direct customers, performed some process steps. But, under the "some connection" theory, patentee is empowered to look beyond the control exerted by one entity over another and examine the amount of contact between the entities.

In addition to \textit{Cordis}, another well-known case to have applied the "some connection" theory is \textit{Marley Mouldings v. Mikron Industries, Inc.}\textsuperscript{119} But unlike \textit{Cordis}, \textit{Marley Mouldings} did not really present a situation that the "agency" theory could not handle. In \textit{Marley Mouldings}, the plaintiff, Marley Mouldings ("Marley"), sued Mikron Industries, Inc. ("Mikron") for infringing its patented method for forming window and doorframes.\textsuperscript{120} The initial step in Marley's method was the production of wood and plastic pellets from a wood and plastic mixture.\textsuperscript{121} Mikron claimed that it was not a direct infringer because it purchased pre-made pellets from an outside vendor and therefore it should be granted summary judgment of non-infringement.\textsuperscript{122} The District Court refused to grant Mikron's motion because the extent of Mikron's involvement with the outside vendor was disputed.\textsuperscript{123} The court found that material issues of fact existed with regard to Mikron's control over the vendor and whether the pellets were produced by the vendor based on specifications provided

\begin{enumerate}
\item \textsuperscript{115} \textit{Id.}
\item \textsuperscript{116} \textit{Id.}
\item \textsuperscript{117} \textit{Id.}
\item \textsuperscript{118} \textit{Id.}
\item \textsuperscript{119} Marley Mouldings Ltd. v. Mikron Indus., Inc., No. 02C 2855, 2003 U.S. Dist. LEXIS 7211 (N.D. Ill. Apr. 29, 2003).
\item \textsuperscript{120} \textit{Id. at }*1-2.
\item \textsuperscript{121} \textit{Id. at }*2.
\item \textsuperscript{122} \textit{Id. at }*6.
\item \textsuperscript{123} \textit{Marley Mouldings}, 2003 U.S. Dist. LEXIS 7211, at *9.
\end{enumerate}
by Mikron. As the District Court was primarily concerned with the nature of Mikron's relationship with its outside vendor and the amount of control Mikron exercised over that vendor, the *Marley Mouldings* decision could just as easily have been based on the "agency" theory. In fact, the situation is a close parallel to *Metal Film*, where the defendant was also using an outside vendor to produce part of the infringing product.

C. "Some Connection" in the Divided Claims Context

Two cases, *Applied Interact v. Vermont Teddy Bear Co.* and *Hill v. Amazon.com*, illustrate the type of connection that is sufficient to show that "some connection" exists between the different infringing entities when the asserted claim is a divided claim. These cases are also significant because they clarify what kind of relationship a vendor needs with its clients in order for there to be "some connection" between the vendor and its clients.


In *Applied Interact*, the plaintiff, Applied Interact ("AI"), was the exclusive licensee of four method patents that covered communications between an "organizer" who broadcasts advertisements or sweepstakes information and the customers who respond to those broadcasts. AI sued Vermont Teddy Bear Co. ("VTB") for infringing the claims in its licensed patents. AI based its argument on the fact that VTB's website offered customers tours of its factory and the opportunity to enter into sweepstakes for a free

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124. *Id.* at *10.
128. Recall that a divide claim is one that requires that separate entities perform the various patented steps of a process. *See* *Lemley*, *supra* note 5, at 1.
129. Note that the *Faroudja* court refused to find that "some connection" based merely on the sale of a product. *Faroudja Labs., Inc. v. Dwin Elecs., Inc.*, No. 97-20010 SW, 1999 U.S. Dist. LEXIS 22987, at *22-23 (N.D. Cal. Feb. 24, 1999). This left open the question of what level of interaction between a vendor and its customers was required before "some connection" could be found.
131. *Id.* at *2-3.
132. *Id.* at *2.
teddy bear. VTB argued that it should not be liable for infringement because it had “no connection with its customers [because] they independently performed certain [claimed] steps.” The District Court disagreed with VTB and found that VTB’s contact with its customers via its website was sufficient to establish “some connection.” Specifically, the court focused on two aspects of VTB’s interaction with its customers. First, the court found that in order to obtain a free tour or be entered in the sweepstakes, the customers had to follow instructions imposed on them by VTB. Second, the court found that VTB performed multiple claim steps. This suggests that direct infringement could be found when an entity performs multiple claim steps and then has pre-sale interactions with potential customers or post-sale interactions with actual customers. For example, when one of the entities has performed several claimed steps, post-sale follow-up surveys or attempts to maintain a continuing relationship with the customers may be sufficient to find “some connection” between the entities.


In Hill, the plaintiff, Hill, had patented a method for generating product related information from a seller’s catalog. Hill’s method required the interaction of two computers: a “main computer” controlled by a customer and a “remote computer” controlled by the product’s seller that contained information about the product. Hill sued Amazon.com, Inc. (“Amazon”), alleging that the patented method was infringed when Amazon’s customers interacted with Amazon’s website. Amazon moved for summary judgment of non-infringement on the basis that it did not perform the “main computer” step of Hill’s method.
The District Court adopted the "some connection" theory and held that "some connection" was present between the infringing entities if (1) the entities had an agency relationship; (2) the entities were in a contractual relationship; or (3) the accused infringer "actually direct[ed] the third party to perform the remaining steps of the [patented] method." Under this standard, the District Court denied Amazon's motion for summary judgment because it found that Amazon designed its website to direct its customer's actions. Just as in Applied Interact, this suggests that when a seller has pre sale interactions with a customer, there is enough of a connection between the seller and his consumer to aggregate the infringing actions.

D. The CAFC takes an expansive view of joint infringement – ODMC

In ODMC, the plaintiff, On Demand Machine Corp. ("On Demand"), held a patent on a method for printing and binding books based on customer selections. Under this method, immediately after a customer selected a book for printing an automated system printed and bound that book for the customer. On Demand sued Ingram Industries ("Ingram"), Ingram's subsidiary Lightning Source ("Lightning"), and Amazon, alleging that the three entities together with their customers jointly infringed On Demand's patented method. A jury agreed with On Demand and returned a verdict of infringement. The defendants appealed that verdict.

One of the issues before the CAFC was the jury instruction regarding joint infringement. The District Court had instructed the jury that joint infringement occurred if "the infringement [was] the result of the participation and combined action(s) of one or more
persons or entities." The CAFC stated that it "discern[ed] no flaw in this instruction as a statement of law." But, the CAFC reversed the judgment of infringement, holding that the joint infringement was not present because On Demand’s patent was primarily based on onsite printing and no onsite printing occurred when Amazon fulfilled customer orders by requesting books from Lightning.

The ODMC decision, like the Pellegirini decision regarding the "agency" theory, is both a positive and a negative for patentees. The positive aspect is that the CAFC endorsed an extremely expansive view of joint infringement, one that covers infringement that resulted from the "participation and combined action(s)" of the parties. This view does not seem to require the type of close relationship the District Court in Medtronic focused on. It also does not seem to require any direction over the actions of one infringing party by another infringing party, which is a more expansive than even the Hill decision. The negative aspect of the ODMC decision is that the CAFC did not really rely on its assertion regarding joint infringement in order to reach its decision, thus the statement could be considered dicta.

E. Limits on the "some connection" theory

Several decisions have addressed the limits on the "some connection" theory, starting with the decision in Faroudja. In Faroudja, the court held that proof of "some connection" between the infringing entities required more than showing that one entity sold a device to another. Subsequent to Faroudja, there have been two cases that have explored other limits on the "some connection" theory.

152. Id. at 1344-45.
153. Id. at 1345.
154. Id.
155. Id. at 1344.
1. *Classen Immunotherapies, Inc. v. King Pharmaceuticals, Inc.* 159

In *Classen Immunotherapies*, the plaintiff, Classen Immunotherapies, Inc. ("Classen"), held a patent on a process for identifying and commercializing new uses for existing drugs. 160 Classen sued two defendants, King Pharmaceuticals ("King") and Elan Co. ("Elan"), alleging that, the companies had infringed its patented process by developing and selling a muscle relaxant. 161 The relationship between King and Elan was somewhat different than in most other joint infringement cases: King had acquired all rights to the muscle relaxant from Elan before performing any of steps in Classen’s patented process. 162 Under the sale agreement between Elan and King, King’s only contact with Elan was its duty to make ongoing royalty payments. 163

Classen argued that Elan’s actions before the sale and King’s actions following the sale should be combined to find that every element of its patented process was performed. 164 Classen argued that the ongoing royalty payments that King had to make to Elan were sufficient to show that “some connection” existed between King and Elan. 165 The District Court agreed with Classen that as long as “some connection” existed between the infringing entities, their actions could be combined to find direct infringement. 166 But, the District Court refused to find that a sufficient connection existed between King and Elan. 167 In granting King’s motion for summary judgment of non-infringement, the court noted that absent “evidence that King controlled Elan or that the two companies cooperated” in developing and commercializing the drug, King and Elan could not be treated as joint infringers. 168 Although this decision involved the sale of all the rights to a product, the finding that ongoing royalty payments are insufficient to constitute “some connection” between the entities, suggest that in the context of a sale, something more than a simple exchange of money is needed to show a connection. This would

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160. *Id.* at 453.
161. *Id.* at 453, 455.
162. *Id.* at 455.
163. *Id.*
164. *Id.*
165. *Id.*
166. *Id.*
167. *Id.* at 455-56.
168. *Id.*
suggest that devices such as pre-paid maintenance agreements might be insufficient to constitute "some connection" between the entities.

2. **BMC Resources Inc., v. Paymentech**\(^{169}\)

The *BMC Resources* decision is notable not only because it discusses a limitation on the "some connection" theory, but also because of its thoughtful analysis of the CAFC’s *ODMC* decision. In *BMC Resources*, the plaintiff, BMC Resources ("BMC"), had patented a method that allowed for individuals to process debit transactions without using their personal identification numbers ("PINs").\(^170\) At least three steps in BMC’s patented method had to be performed by third party financial institutions.\(^171\) After learning that Paymentech had a similar system for merchants, BMC sued Paymentech for direct and indirect infringement.\(^172\) BMC argued that "some connection" was present between Paymentech and the financial institutions because Paymentech provided data to financial institutions.\(^173\) Paymentech disagreed and moved for summary judgment of non-infringement on the basis that (1) it did not perform all of the steps in BMC’s patented method and (2) it did not have sufficient control over the financial institutions to establish "some connection" between it and the institutions.\(^174\)

The District Court reviewed the existing case law, including CAFC’s *ODMC* decision, before adopting the "some connection" theory.\(^175\) BMC had argued that the District Court should adopt the *ODMC* standard for joint infringement, that joint infringement is "infringement [that] is the result of the participation and combined actions" of more than one entity.\(^176\) But, the District Court refused to adopt this standard, noting that (1) the CAFC "did not rely on the relation between the entities in its holding" and (2) the CAFC held that the patent was not infringed regardless of the relationship


\(^{170}\) Id. at *1-2.

\(^{171}\) Id. at *12.

\(^{172}\) Id. at *4. BMC argued that Paymentech was liable for indirect infringement under both an active inducement theory and a contributory infringement theory.

\(^{173}\) Id. at *14-15.

\(^{174}\) Id. at *4-5.

\(^{175}\) BMC Res., Inc. v. Paymentech L.P., No. 3:03-CV-1927-M, 2006 U.S. Dist. LEXIS 37746, *9-12* (N.D. Tex. May 24, 2006). The court rejected the assertion that the CAFC’s decision in *ODMC* controlled because the CAFC did not rely on its statement regarding joint infringement. Id. at *11 n.3

\(^{176}\) Id. at *11 n.3.
between the entities.\textsuperscript{177} Instead the District Court adopted a Hill-like standard for the "some connection" theory, holding that "some connection" existed when the infringer "directed or controlled" the actions of the other infringing entities.\textsuperscript{178} The court found that evidence that Paymentech provided data to the financial institutions was insufficient under the "some connection" theory and that BMC needed to show more direction or control.\textsuperscript{179} Since BMC could not show this, the District Court granted Paymentech's motion for summary judgment of non-infringement.\textsuperscript{180} This suggests that a simple or routine exchange of information between the infringing entities, without some additional element of cooperation or control, is not sufficient to form "some connection" between the entities for the purposes of patent infringement.

IV. ADVICE FOR PATENTEES

As noted earlier, there are two common situations in which a patentee may need to avail itself of a joint infringement theory. The first situation involves entities that arrange their affairs such that no one entity infringes every claim limitation or process step. In this situation, a patentee must to resort to either the "agency" or "some connection" theory in order to establish liability for direct infringement. The second situation, the divided claims situation, may present the patentee with one additional option. Since the divided claims situation involves process claims drafted in a manner that requires different entities to perform different steps, a patentee may be able to avoid arguing either the "agency" or "some connection" theory during litigation by drafting its claims such that can be directly infringed by the actions of a single entity.\textsuperscript{181}

Of the two theories of joint infringement, the "agency" theory is the oldest and the most likely to be accepted by a court because of its basis in agency and tort law.\textsuperscript{182} In addition, Crowell, the case to first formally recognize the theory, was recently cited with approval by

\begin{footnotesize}
\begin{enumerate}
\item \textsuperscript{177} Id.
\item \textsuperscript{178} Id. at *20.
\item \textsuperscript{179} Id. at *18-19.
\item \textsuperscript{181} See Lemley, supra note 5, at 14. Avoidance may not be an option for all patentees. In some cases a patentee may only be able to draft its claims in a divided manner because only the combination of independent process steps performed by separate entities into a single claim satisfies the 35 U.S.C. \S 102 (2000) novelty requirement for patentability.
\item \textsuperscript{182} Crowell v. Baker Oil Tools, 143 F.2d 1003 (9th Cir. 1944).
\end{enumerate}
\end{footnotesize}
the CAFC. Extrapolating from the case law, a patentee should be able to employ the "agency" theory in situations where an entity

- Employs agents to perform infringing acts,
- Uses independent contractors or third parties to perform a step in a patented process, or
- Sells a product to customers with the knowledge that the customers will complete the remaining patented steps or finish the manufacturing to obtain the patented article.

As the basis for the "agency" theory focuses on control, a patentee who proceeds under this theory should try to develop evidence that one infringing entity exercised some control over the other infringing entities. If evidence of control is absent, a court may rule that there cannot be any liability for joint infringement.

The second, and newer, theory of joint infringement is the "some connection" theory. Generally, the focus of the "some connection" theory is on the extent of contact between the infringing entities. The recent CAFC's decision in ODMC seems to suggest that very little contact is needed between the entities as the CAFC approved of a jury instruction stating that joint infringement could be found when "the infringement [was] the result of the participation and combined action(s) of one or more persons or entities." But, courts have already started to doubt the viability of this standard, thus a prudent patentee should probably continue to focus on whether:

- The entities have an agency relationship;
- The entities have a contractual relationship;
- The accused infringer "actually direct[ed] the third party to perform the remaining steps of a [patented] method".

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184. Crowell, 143 F.2d at 1004.
187. See Mobil Oil Corp. v. Fitrol Corp., 501 F.2d 282, 291-92 (9th Cir. 1974).
188. Id.
189. A District Court recently refused to apply ODMC, arguing that the CAFC's statement therein was merely dicta because the CAFC's decision was not based on the "joint infringement" theory. See BMC Res., Inc. v. Paymentech, No. 3:03-CV-1927-M, 2006 U.S. Dist. LEXIS 37746, *20-21 (N.D. Tex. May 24, 2006).
191. Id.
192. Id.
The entities "work[ed] in concert... to complete the process"; or
There is "direct contact" between the entities.

In terms of specific factual examples of connections, courts have found that one infringing entity providing samples or specifications to another infringing entity is sufficient to find "some connection" between the entities. Courts have also found that regular, continuous contact between the entities is probably sufficient. With respect to customers, a seller or vendor generally needs to do more than merely sell a product to its customers in order to have "some connection" with them. Pre or post sale contact between the seller and the customers may be sufficient to show a connection between the entities. Similarly, merely making royalty payments is probably insufficient to establish "some connection" between the entities. In addition, the routine exchange of information between the infringing entities, without some additional element of cooperation or control, will probably not be sufficient to form "some connection" between the entities for the purposes of patent infringement.

A common limitation on both joint infringement theories is that they are geographically limited to infringing acts committed within the United States, which is a limitation that is entirely consistent with the CAFC's recent jurisprudence in other direct infringement cases.

194. Id. at *19.
197. See Faroudja, 1999 U.S. Dist. LEXIS 22987, at *22-23.
198. See supra section III.C.
202. In the context of process, the CAFC recently held that "a process cannot be used 'within' the United States as required by section 271(a) unless each of the steps is performed within [the United States]." NTP, Inc. v. Research in Motion, Ltd., 418 F.3d 1282, 1318 (Fed. Cir. 2005).
V. CONCLUSION

The case law regarding joint infringement provides patentees with a way of aggregating the actions of multiple infringing parties. Patentees have not one, but two avenues, for dealing with situations involving multiple infringers: the "agency" and "some connection" theories. The "agency" theory has endured for more than sixty years and has been cited with approval by the CAFC. It is an established theory that allows patentees to hold infringers liable in cases where the patentee can demonstrate some level of control by one infringer over the actions of the other infringers. The "some connection" theory, though much younger, has been adopted by many courts and covers a broader range of joint infringement. Together, the "agency" and "some connection" theories provide patentees with a good legal framework for establishing liability against multiple infringers.

203. Pellegrini, 375 F.3d at 1115.