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### ***The Shifting Battleground: Focusing on Enablement*** **(Appearing originally in *New Matter*, Vol. 34, No. 2 (2009))**

Often when an unsophisticated client reads the specification of a patent, the client's initial reaction is to shrug off the patent because the specification bears no, or at most a tenuous, relationship to the defendant's business. That reaction turns to surprise or even outrage when a patent attorney explains that the claims can still cover the client's business. Welcome to one of the basic principles of patent law -- a patent's claims can have a far broader scope than the embodiments described in the specification.

This principle is not unbounded and litigators inevitably attempt to limit the claims to what is described in the specification. This almost always leads to the classic claim construction dispute. The plaintiff seeks to interpret the patent's claims broadly often relying on the ordinary meaning of the claim language while the defendant tries to interpret the claims narrowly so that they only cover the disclosed embodiments. Case law makes it clear that limitations cannot simply be imported into the claims from the preferred embodiment. *Phillips v. AWH Corp, et al.*<sup>2</sup> Instead, a defendant will only be able to link the claim to the preferred embodiment if it can show that a term or phrase in the claim should be interpreted in a narrow fashion. Often the specification and prosecution history do not provide any support for the narrower definition the defendant seeks. If that is case, and the ordinary meaning of the claim is broad,

the plaintiff's interpretation usually prevails.

Recent Federal Circuit decisions have expanded the enablement defense and provided defendants with a different tool to challenge claims that have far broader scope than the specification. In *Liebel-Flarsheim v. Medrad*,<sup>3</sup> *Automotive Technologies International v. BMW, et al.*<sup>4</sup> and *Sitrick v. Dreamworks LLC*<sup>5</sup>, the Federal Circuit found 35 U.S.C. § 112 requires that "the full scope of the claimed invention must be enabled."

This analysis would not have been surprising if the patents related to the unpredictable arts (e.g. chemical or biotechnology). In those fields, the law has long required the specification to enable the full scope of the claims.<sup>6</sup> However, the patents in the three recent enablement cases related to technology that would normally be considered to be in the predictable arts and the decisions did not argue otherwise or even discuss predictability. Rather, the decisions focused on the breadth of the claims and compared that against what the specification enabled. In each case, the Federal Circuit invalidated broad claims because they identified some device that fell within the scope of the claims that was not enabled.

These decisions suggest that enablement will become a new hotly contested issue in many patent cases.

When a patent's claims appear far broader than the specification, defendants will undoubtedly raise the enablement issues along with the traditional claim construction issues. Attorneys representing both plaintiffs and defendants on both sides should be prepared.

### ***A. Section 112, Enablement***

The statutory basis of the enablement requirement is found in 35 U.S.C. § 112 which states that the specification shall describe:

. . . the manner and process of making and using [the invention], in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the [invention] . . .

Traditionally, courts have found that this requirement is satisfied when a person of ordinary skill in the art, after reading the specification could practice the claimed invention without undue experimentation.<sup>7</sup> In practice, that standard has been applied differently in the predictable and unpredictable arts.

### ***B. Different Technology, Different Standard***

In the unpredictable arts, it is not sufficient to simply enable one embodiment. The specification "must teach those skilled in the art how to make and use the full scope of the claimed invention without 'undue experimentation.'"<sup>8</sup>

For example in *In Re Wright*, Wright filed a patent application that described the production of a recombinant vaccine

which confers immunity in chickens against the RNA tumor virus known as Prague Avian Sarcoma Virus ("PrASV"). The application contained claims directed to the specific process and vaccine disclosed in the specification.<sup>9</sup> However, the application also sought claims for a much broader scope of protection including claims that read "on vaccines against *all* pathogenic RNA viruses."<sup>10</sup> The patent office rejected the broader claims on the grounds that the specification did not enable the full scope of the claims. The Federal Circuit upheld the rejection explaining that "Wright has failed to establish by evidence or arguments that . . . a skilled scientist would have believed reasonably that Wright's success with a particular strain of an avian RNA virus could be extrapolated with a reasonable expectation of success to other avian RNA viruses."<sup>11</sup> Thus, even though specification had enabled one embodiment of the claims, that was insufficient to show enablement under § 112.

In contrast, cases in the predictable arts have found that describing one embodiment is sufficient to enable much broader claim. For example in *Spectra-Physics, Inc. v. Coherent, Inc.*<sup>12</sup>, the ion laser patents stressed the importance of attaching two components that would have to endure repeated heat cycles.<sup>13</sup> That feature was evident in the claims at issue which required a "means for attaching" or essentially the same step of "permanently securing."<sup>14</sup> The district court found that claims were not enabled because the specification only disclosed pulse soldering and moly-manganese brazing. However, the evidence showed that the patentee actually used a six stage braze cycle that was "necessary to the

enjoyment of the invention.”<sup>15</sup> The Federal Circuit reversed the lack of enablement finding and stated:

If an invention pertains to an art where the results are predictable, e.g., mechanical as opposed to chemical arts, a broad claim can be enabled by disclosure of a single embodiment, [citations omitted], and is not invalid for lack of enablement simply because it reads on another embodiment of the invention which is inadequately disclosed.<sup>16</sup>

Thus, *Spectra-Physics* stands for the proposition that in the predictable arts, a disclosure of single embodiment is sufficient to enable a much broader claim that is not taught. Indeed, *Spectra-Physics* relies, in part, on *Gould* which characterized the rule quoted above as a “settled rule.”<sup>17</sup>

The Federal Circuit has justified this distinction by explaining that in the predictable arts, disclosure of an example teaches a person of ordinary skill in the art how to use the invention broadly. However, that is not the case in the unpredictable arts where undue experimentation is needed.<sup>18</sup>

**C. Empowering Enablement Defenses:  
*Liebel-Flarsheim, Automotive Technologies, and Sitrick***

*Liebel-Flarsheim, Automotive Technologies* and *Sitrick* concerned technology that had traditionally been considered the predictable arts -- front loading fluid injector, side impact sensors for cars, and integrating audio and video images into preexisting content. The front loading fluid injector involved mechanical components. The

side impact sensor involved both mechanical and electrical components. The integration technology involved electrical components and software. Typically, mechanical and electrical technology are both classified as falling within the predictable arts while technology involving chemical reactions and physiological activity fall within the unpredictable arts.<sup>19</sup> In the three recent enablement decisions, the Federal Circuit chose not to rely on these categories. Rather, the opinions focused on the more basic question -- whether the specification taught a person of ordinary skill in the art the full scope of the invention without undue experimentation.

**1. *Liebel-Flarsheim***

In *Liebel-Flarsheim*, the invention was a front-loading fluid injector system with a replaceable syringe capable of withstanding high pressure for delivering a contrast agent to a patient.<sup>20</sup> The specification only described an injector with a pressure jacket but the asserted claims did not mention the pressure jacket. As a result, the Court construed the claims to include an injector with and without a pressure jacket.<sup>21</sup>

However, the breadth of the claim led to a lack of enablement finding. In an opinion authored by Judge Lourie, the Federal Circuit found that there was no enablement of a fluid injector without a pressure jacket. Therefore, the specification failed to enable the full scope of the claim. The decision focused on two facts. First, the specification only described an injector with a pressure jacket and there was no guidance on how to make or use a system without a pressure jacket.<sup>22</sup> The specification even

taught away from a pressure jacket by calling them “expensive and impractical” in the context of a disposable syringe.<sup>23</sup> Second, the Court noted that “[t]he inventors admitted that they had unsuccessfully tried to produce a pressure-jacketless system and that such a system would require more extensive experimentation and testing.”<sup>24</sup> The Court in *Liebel-Flarsheim*, distinguished *Spectra-Physics* by arguing that the specification in *Spectra-Physics* somehow enabled a person of skill in the art to make the invention as broadly as it was claimed. It is unclear how the Court arrived at that conclusion. *Spectra-Physics* never discusses whether a person of ordinary skill in the art could use the specification to make and use the undisclosed six step braze cycle without undue experimentation. Judge Lourie’s characterization of *Spectra-Physics* appears to be attempt to reconcile with his decision previous case law as opposed to directly challenge it.

In sum, *Liebel-Flarsheim* suggests that disclosing a single embodiment does not necessarily enable the full scope of a patent’s claims. However, such a disclosure is sufficient if a person of ordinary skill in the art could make and use the invention more broadly than disclosed. If that is not the case, the specification must describe the other embodiments that fall within the claims. Otherwise, the claim is invalid for lack of enablement.

## **2. Automotive Technologies**

In the subsequent opinion, *Automotive Technologies*, Judge Lourie appeared to push this theory one step further. In *Automotive Technologies*, the invention was a new type of side impact

sensor for use in vehicles. The prior art used a crush sensor for sensing side impacts.<sup>25</sup> The patented side impact sensor used a velocity based sensor which had the advantage of sensing an impact even when the side is not directly hit.<sup>26</sup> During the prosecution of the patent, the patentee explained that this feature was the “essential concept of the invention” and called it a “breakthrough.”<sup>27</sup> The specification provided a detailed description of how to make a mechanical side impact sensor. It also noted that an electronic sensor could be used and provided a conceptual diagram of one.<sup>28</sup> However, the specification failed to explain how to make an electronic sensor.<sup>29</sup> The claim at issue was not limited to a mechanical velocity based sensor. It also covered an electronic velocity based sensor as well. The Federal Circuit once again found that the claim was invalid for failing to enable the full scope of the claim.

In arriving at its decision, the Court focused on the specification’s failure to provide a meaningful description of how to make an electronic velocity based sensor. In contrast to *Liebel-Flarsheim*, the Court discounted the knowledge of one skilled in the art explaining “the novel aspect of the invention must be enabled in the patent.”<sup>30</sup> Since “[t]he novel aspect of this invention is using a velocity-type sensor for side impact sensing”, the Court said that it was insufficient to “merely state that known technologies can be used to create an electronic sensor.”<sup>31</sup> The plaintiff in *Automotive Technologies* attempted to make that very showing by offering an expert declaration that explained why “one skilled in the art would know how to adapt then-existing technology to create an electronic side impact sensor”

and stating “that electronic sensors were commercially available” that could be incorporated into the claims.<sup>32</sup> The Court rejected that declaration as conclusory.<sup>33</sup> But the Court’s earlier analysis suggests that a better supported declaration would not have changed the outcome.

Thus, *Automotive Technologies* suggests that the failure to disclose the full scope of a patent’s claims is fatal if that failure relates to the novel aspect of the patented invention. Even if a person of ordinary skill in the art would know how to make and use the claim more broadly than disclosed, a broad claim is still invalid for lack of enablement if the specification itself does not enable the full scope of the claim.

### 3. *Sitrick*

In *Sitrick*, the patents involved integrating a user’s audio signal or visual image into preexisting video game or movie. The specifications described specific videogame signals and disclosed how an Intercept Adapter Interface System (“IAIS”) would select, analyze and identify characters.<sup>34</sup> The specifications also generally discussed how the same techniques would work for movies.<sup>35</sup> The asserted claims covered both video games and movies.<sup>36</sup> Again, the Federal Circuit found that the asserted claims were invalid for lack of enablement because the specification did not enable the full scope of the claimed invention.

In arriving at its decision, the Federal Circuit noted that “[m]ovies do not have easily separable character functions, as video games do”,<sup>37</sup> and the specification did not teach how to obtain those

functions from a movie. Moreover, defendants’ expert explained the disclosed analysis techniques are not applicable to movies.<sup>38</sup>

*Sitrick*, was authored by Judge Moore and it shows that *Liebel-Flarsheim* and *Automotive Technologies* do not simply represent the personal views of Judge Lourie. Broad claims that are only supported by one embodiment are at risk. Indeed, the *Sitrick* decision said that it did not even need to determine whether the specification was enabled with respect to video games. If the claims were not enabled for movies as well, the broad claims are invalid.<sup>39</sup>

### D. *Where is Enablement Law Going?*

In each of these three recent enablement cases, the Federal Circuit invalidated broad claims that attempted to cover subject matter suggested by the specification, but not enabled. The heightened enablement requirement represented by *Liebel-Flarsheim*, *Automotive Technologies* and *Sitrick* may satisfy some sense of justice by penalizing patentees trying to overreach with their claims. As Judge Lourie cautioned “beware of what one asks for.”<sup>40</sup>

However, these three decisions have opened the door for many future disputes over the full extent of the enablement defense. Some of these cases may not satisfy notions of justice in the same way. For example, the enablement defense should apply regardless of whether the accused products are or are not similar to the patent’s specification. Thus, the defendant to *any* broadly drafted claims will raise the enablement

defense in hope of finding some technology that is covered by the claims but not enabled.

Other defendants will use the enablement defense to try to show that the plaintiff failed to enable the defendant's particular variation of the technology. For example, a patent might describe how a communication product may work using a particular interface protocol, but claim the product broadly. Can the claims cover other protocols absent a detailed discussion in the specification? In other words, is the Federal Circuit unintentionally inviting lengthy disclosures that describe every possible embodiment that the applicant and prosecuting attorney can imagine? These and many more questions about the limits of the enablement defense are waiting in the wings.

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#### Endnotes

<sup>1</sup> This article is based on a recent article published in the Stanford Technology Law Review. See, Bernard Chao, Rethinking Enablement in the Predictable Arts, Fully Scoping the New Rule, 2009 STAN. TECH. L. REV. 3 (2009).

<sup>2</sup> *Phillips v. AWH Corp, et al.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (*en banc*).

<sup>3</sup> *Liebel-Flarsheim v. Medrad*, 481 F.3d 1371 (Fed. Cir. 2007).

<sup>4</sup> *Automotive Technologies International v. BMW, et al* 501 F.3d 1274 (Fed. Cir. 2007).

<sup>5</sup> *Sitrick v. Dreamworks LLC*, 516 F.3d 993 (Fed. Cir. 2008).

<sup>6</sup> See, e.g., *In Re Wright*, 999 F.2d 1557, 1563 (Fed. Cir. 1993).

<sup>7</sup> *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1384, (Fed. Cir. 1986).

<sup>8</sup> *In Re Wright*, *supra* note 7, at 1561.

<sup>9</sup> *Id.* at 1559.

<sup>10</sup> *Id.* at 1560.

<sup>11</sup> *Id.* at 1564.

<sup>12</sup> *Spectra-Physics, Inc. v. Coherent, Inc.*, 827 F.2d 1524, 1533 (Fed. Cir. 1987).

<sup>13</sup> *Id.* at 1529.

<sup>14</sup> *Id.* at 1533.

<sup>15</sup> *Id.*

<sup>16</sup> *Id.* at 1537 citing to *Gould v. Mossinghoff*, 711 F.2d 396, 400 (D.C.Cir.1983). The Federal Circuit did uphold district's court's invalidity finding on the alternative ground of failing to disclose the best mode.

<sup>17</sup> *Id.*

<sup>18</sup> *In re Fisher*, 427 F.2d 833, 839 (CCPA 1970).

<sup>19</sup> See, e.g., *id.* at 839; *Spectra-Physics, supra* note 12, at 1533.

<sup>20</sup> *Liebel-Flarsheim, supra* note 4, at 1373.

<sup>21</sup> *Id.* at 1375.

<sup>22</sup> *Id.* at 1379.

<sup>23</sup> *Id.*

<sup>24</sup> *Id.*

<sup>25</sup> *Automotive Technologies, supra* note 5, at 1277.

<sup>26</sup> *Id.*

<sup>27</sup> *Id.* at 1283.

<sup>28</sup> *Id.* at 1278.

<sup>29</sup> *Id.*

<sup>30</sup> *Id.* at 1283.

<sup>31</sup> *Id.*

<sup>32</sup> *Id.* at 1284.

<sup>33</sup> *Id.* at 1284-1285.

<sup>34</sup> *Sitrick, supra* note 6, at 997.

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<sup>35</sup> *Id.* at 997-998.

<sup>36</sup> *Id.* at 1000.

<sup>37</sup> *Id.* at 1000 (quoting district court opinion).

<sup>38</sup> *Id.* at 1000.

<sup>39</sup> *Id.* at 1000.

<sup>40</sup> *Liebel-Flarsheim*, *supra* note 4, at 1380.