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Foreseeability Does Not Bar the Doctrine of Equivalents, Including for Means-Plus-Function Limitations
by J. Derek McCorquindale

In the recent *Ring & Pinion Service Inc. v. ARB Corp.* decision, the U.S. Court of Appeals for the Federal Circuit held that the foreseeability of an equivalent at the time of filing does not, in itself, create a bar to reliance on the doctrine of equivalents (DOE). The unanimous Federal Circuit panel confirmed that infringement can indeed be found under the DOE, notwithstanding that, at the time of the application, the equivalent limitation in question was foreseeable to one of ordinary skill. Further, *Ring & Pinion* clarifies how the DOE applies to claims written with functional language, and dispels the notion that prior case law ever precluded the application of the DOE to foreseeable equivalents of means-plus-function claim limitations.

Under the DOE, “a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is ‘equivalence’ between the elements of the accused product or process and the claimed elements of the patented invention.” In another context, notions of “equivalence” are also analyzed when claim terms are drafted in “means-plus-function” form, as permitted by 35 U.S.C. § 112(f). When a means-plus-function limitation appears in a claim, it strictly covers only the structures “described in the specification and equivalents thereof.” There has thus been considerable debate over the last two decades on the application of the DOE to means-plus function limitations. On the one hand, it is widely recognized that the DOE allows enforceable equivalents to read on insubstantial variations in after-arising technology, in effect compensating for the patent drafter’s inability to claim unforeseeable matter. On the other hand, it has been suggested that if alternative structures were foreseeable at the time of patenting, then means-plus-function claiming required their disclosure in the originally filed specification in the first place, and should bar reliance on the DOE. The apparent tension between these “equivalence” concepts was again on display in *Ring & Pinion*.

Declaratory judgment plaintiff Ring & Pinion (R&P) claimed before the trial court that its product did not infringe ARB’s patent directed to an improved automobile locking differential. Claim 1 was deemed representative:

A locking differential comprising
  a differential carrier . . . ,
  a locking means . . . , [and]
  cylinder means formed in said differential carrier and housing an actuator position[ed] to cause movement of said locking means relative to said carrier . . . .

There was no dispute that all limitations were literally met in R&P’s “Ziplocker” product except for one—the “cylinder means formed” element. The parties agreed, however, that the “Ziplocker” had an equivalent to the cylinder, albeit one that would have been foreseeable to a person having ordinary skill in the art at the time the patent application was filed. Accordingly, the parties entered a formal stipulation that the infringement analysis hinged on a discrete question of law: whether an equivalent is barred under the DOE because it was foreseeable at the time of the patent application.
The district court held that foreseeability did not, as a matter of law, preclude ARB’s reliance on the DOE. However, the court granted summary judgment of noninfringement because of claim vitiation.10

On appeal, R&P argued that there was a general foreseeability bar to the DOE, relying mainly on an interpretation of Sage Products, Inc. v. Devon Industries, Inc.11 That nearly twenty-year-old case was thought by some to have created a new foreseeability rule that reined in the scope of the DOE. This foreseeability rule, if it existed, would have created a sort of “patent drafter estoppel” whereby equivalent structures that should have been foreseeable during prosecution would be precluded under the DOE.12 The primary rationale for such a rule is public notice.13 While the Federal Circuit has moved away from reading Sage Products to require that applicants literally identify all foreseeable equivalents in the claims,14 the well-worn argument persists. The Federal Circuit in Ring & Pinion addresses the question directly and, perhaps, permanently.

Judge Moore, writing for the unanimous Federal Circuit panel that included Judges Clevenger and Reyna, observed succinctly that “[t]here is not, nor has there ever been, a foreseeability limitation on the application of the doctrine of equivalents.”15 Quite to the contrary, the court noted that known interchangeability can in fact weigh in favor of finding infringement under clear DOE precedent, such that excluding equivalents that were foreseeable at the time of patenting would directly conflict with these holdings that “known interchangeability” supports infringement under the doctrine of equivalents. We conclude that the foreseeability of an equivalent at the time of patenting is not a bar to a finding of infringement under the doctrine of equivalents.16

The court distinguished Sage Products, explaining that the scope of the claims there were limited in such a way that they necessarily excluded a structural feature that was the opposite of the one recited in the claim, precluding infringement under the DOE only because it would have entirely vitiated a claim limitation based on the facts of the case.17 Thus, Sage Products was seen as enforcing the traditional “all elements” rule18 and not creating a new foreseeable equivalents bar.19

R&P’s fallback position was more modest, arguing that another prior case, Chiuminatta Concrete Concepts, Inc. v. Cardinal Industries, Inc.,20 established a foreseeability bar to the application of the DOE specifically for means-plus-function limitations. The court explained that this R&P argument was equally flawed, and that “[n]othing in Chiuminatta or in any other case cited by R&P supports its assertion that there exists a foreseeability exception to the doctrine of equivalents that applies to means-plus-function or any other claim terms.”21

Recognizing that there could be confusion about the different types of “equivalents”—i.e., equivalents under the DOE and equivalents under § 112(f)—the Federal Circuit further explained that there are two distinctions between these two types of equivalents: differences in timing and differences in function.22

On timing, the court explained that because equivalence in the literal infringement context of § 112(f) is evaluated at the time of a patent’s issuance, whereas equivalence in the DOE context is evaluated at the time of infringement, an after-arising technology “can be found to be an equivalent under the doctrine of equivalents even though it cannot be an equivalent under the literal infringement analysis of § 112(f).”23

On function, the court explained that literal infringement requires that the accused structures perform the identical function recited in the claim, whereas the DOE famously covers structures performing substantially the same function in substantially the same way with substantially the same result. The court explained that “[t]he doctrine of equivalents thus covers structures with equivalent, but not identical functions. This is true whether the accused equivalent was known at the time of patenting or later arising.”24 The DOE as applied to means-plus-function elements, therefore, requires only that the equivalent structure perform substantially the same function, whether known or unknown at patenting.25
The court reminded that “[w]here a finding of non-infringement under § 112(f) is based solely on the lack of identical function, it does not preclude a finding of equivalence under the doctrine of equivalents.” Accordingly, when the accused technology was known at the time of patenting and the functions are identical, the structural equivalence inquiries of the DOE and § 112 are coextensive. Nothing in Chiuminatta, reiterated the court, suggests a different approach as it applies to means-plus-function terms.

Thus, the Federal Circuit agreed with the district court’s legal conclusion that foreseeability does not create a bar to the application of the DOE. Having correctly determined the foreseeability issue, however, the trial court should have just entered the stipulation as agreed to by the parties, according to the Federal Circuit, instead of indulging a further vitiation argument. The court reversed and remanded with instructions to grant summary judgment of infringement to ARB.

Practitioners can perhaps rest more easily after Ring & Pinion. A restrictive “patent drafter estoppel” was again affirmatively rejected in this latest examination of the question. Applicants need not exhaustively list every known variation when claim limitations are drafted in means-plus-function format in order to later benefit from the DOE. Rejecting a per se bar for foreseeable equivalents tends to promote efficiency in claiming and avoids the need to literally cover each insubstantial difference to function in § 112(f) claiming.


2 Id. at *5-7.

3 Id. at *7-9.


5 Id. at 27 (“[A]n applicant can describe an element of his invention by the result accomplished or the function served, rather than describing the item or element to be used (e.g., ‘a means of connecting Part A to Part B,’ rather than ‘a two-penny nail’).”).


8 A differential is a mechanism that allows wheels to spin at different speeds. A locking differential distributes torque from the engine such that wheels spin at the same rate when locked. See Ring & Pinion, 2014 U.S. App. LEXIS 2962, at *1.

9 U.S. Patent No. 5,591,098, claim 1 (emphasis added).


11 126 F.3d 1420 (Fed. Cir. 1997).


13 Johnson & Johnston, 285 F.3d at 1056 (Rader, J., concurring) (“[T]he doctrine of equivalents does not capture subject matter that the patent drafter reasonably could have foreseen during the application process and included in the claims enhances the notice function of [the] claims by making them the sole definition of invention scope in
See, e.g., Overhead Door Corp. v. Chamberlain Grp., Inc., 194 F.3d 1261, 1271 (Fed. Cir. 1999); WMS Gaming Inc. v. Int’l Game Tech., 184 F.3d 1339 (Fed. Cir. 1999); Al-Site Corp. v. VSI Int’l, Inc., 174 F.3d 1308, 1320-21 (Fed. Cir. 1999).


15 Id. at *6 (citing, inter alia, Warner-Jenkinson, 520 U.S. at 36 (“The known interchangeability of substitutes for an element of a patent is one of the express objective factors . . . bearing upon whether the accused device is substantially the same as the patented invention.”)).

16 Id. at *6-7 (quoting SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc., 242 F.3d 1337, 1346 (Fed. Cir. 2001)).

17 The “all elements” rule requires that the accused device contain each limitation of the claim, either literally or by an equivalent, to be infringing. TIP Sys., LLC v. Phillips & Brooks/Gladwin, Inc., 529 F.3d 1364, 1379 (Fed. Cir. 2008); Freedman Seating Co. v. Am. Seating Co., 420 F.3d 1350, 1358 (Fed. Cir. 2005). Most often, the “all elements” rule serves to prevent vitiation of a claim limitation when the infringement theory is based on the DOE. Trading Techs. Int’l, Inc. v. eSpeed, Inc., 595 F.3d 1340, 1355 (Fed. Cir. 2010) (quoting in Warner-Jenkinson, 520 U.S. at 39 n.8 (1997)).

18 Ring & Pinion, 2014 U.S. App. LEXIS 2962, at *6-7 (citing Overhead Door, 194 F.3d at 1271).

19 145 F.3d 1303 (Fed. Cir. 1998).


21 Id. at *8.

22 Id.

23 Id.

24 Id. at *9.

25 Id.

26 Id. (citing Al-Site, 174 F.3d at 1320 n.2 (holding that for preexisting structures where functions are identical, “any analysis for equivalent structure under the doctrine of equivalents collapses into the [§ 112(f)] analysis”).

27 Id. at *10.

28 Id. at *11-12 (“A stipulation of fact that is fairly entered into is controlling on the parties and the court is generally bound to enforce it. Here the partes stipulated to equivalence . . . .”).

29 Id. at *13.
The Saga of Patent Eligibility of Business Methods Continues in SmartGene v. ABL

by Eric P. Raciti

We reported in the last edition that the U.S. Supreme Court had agreed to consider the case of *Alice Corp. Pty. Ltd. v. CLS Bank International* (No. 13-298) regarding patent-eligible subject matter. The CLS Bank decision was covered in the June 2013 edition of *Full Disclosure*. Click here. Oral arguments are scheduled for March 31, 2014, with a decision expected in the early summer.

As readers of *Full Disclosure* know, the en banc decision in *CLS Bank International v. Alice Corp. Pty. Ltd.*, 717 F.3d 1269 (Fed. Cir. 2013) (en banc), failed to clarify the boundaries of patent eligibility for U.S. applicants. If the fractured decision has any value, it is in providing interesting clues to how individual Federal Circuit judges view the question of patent eligibility. It is hoped that when the Supreme Court opines on 35 U.S.C. § 101 this time, it will impart some predictability to the patent-eligibility analysis.

The recent decision in *SmartGene, Inc. v. Advanced Biological Laboratories, SA*, No. 2013-1186 (Fed. Cir. Jan. 24, 2014) (unpublished), is nonprecedential but is nevertheless interesting because the opinion was authored by Circuit Judge Richard Taranto, who joined the Federal Circuit in 2013 but did not participate in the CLS Bank decision.

Judge Taranto was joined in his opinion in SmartGene by Judges Lourie and Dyk. Judge Lourie, joined by Judge Dyk and three other judges, wrote a concurring opinion in CLS Bank affirming the district court’s holding that all claims were patent ineligible under 35 U.S.C. § 101.

In CLS Bank, Judge Lourie evaluated Supreme Court decisions and proposed an “integrated approach” to § 101 questions based on three themes appearing in those precedents: 1) patents should not preempt fundamental tools of discovery by claiming a natural law, natural phenomenon, or abstract idea; 2) the substance of a claim is more important than its form in determining patent eligibility; and 3) courts should avoid rigid rules regarding subject-matter eligibility. Based on these themes, Judge Lourie proposed a four-step “integrated” approach:

1. Verify that the claim fits into one of the four statutory classes of invention (process, machine, manufacture, or composition of matter);
2. Determine whether the claim raises § 101 abstraction concerns at all;
3. If abstraction concerns arise, unambiguously identify the fundamental concept or abstract idea; and
4. After identification of the abstract idea, evaluate the remainder of the claim to determine whether it contains an “inventive concept” in the form of a “genuine human contribution” above and beyond the involved abstract idea.

Lourie then applied this approach and found all the method claims patent ineligible under § 101. For the method claims in question, Judge Lourie found that the requirement to implement the method through a computer failed to supply an “inventive concept” because it did no more than add generic computer
functionality to make the processing faster. Judge Lourie similarly found the system claims invalid, as they only served to limit the method to a particular technological environment, which was not enough to satisfy § 101. Judge Lourie’s opinion found, at least in this case, that the method and system claims should “rise or fall” together, so that the substance of a claim controls its eligibility under § 101, rather than how artfully it was drafted.

The decision in SmartGene reveals a similar approach by Judge Taranto in holding all of the claims as patent ineligible under § 101. Judge Taranto had no problem identifying the fundamental concept of the claims: the claims were directed to an expert system including a method and system for proposing treatment options for a patient based on a consultation of three separate databases. The claims were written in generic terms to include “providing” patient information to a “computing device” and “generating” a ranked list of treatment options. Judge Taranto, without formulating a specific approach, appeared to follow the same analytical framework advocated by Judge Lourie in CLS Bank. Beginning with the question of whether SmartGene’s patent contained an inventive concept, Judge Taranto noted that “[t]he claim . . . calls on a computer to do nothing that is even arguably an advance in physical implementations of routine mental information-comparison and rule-application processes. In this context, the concern about preempting public use of certain kinds of knowledge, emphasized in Mayo, is a grave one.” SmartGene, slip op. at 9-10. Following the Supreme Court’s precedents, Judge Taranto—as did Judge Lourie in CLS Bank—found that the claims did no more than recite a “computing device,” with basic functionality “to do what doctors do routinely.” Id. at 8. Judge Taranto went on to complain that the only independent claim placed “only very broad limitations on a ‘computing device’” that rendered it like a doctor’s mind, and not like any specific technological implementation. Id. at 8-9.

It is tempting to speculate what the result in CLS Bank would have been had Judge Taranto participated in the en banc decision. It should be recalled that Judge Taranto recently joined the Federal Circuit from a private law practice, as opposed to another judicial position, so some might argue that his analyses could be more in line with Supreme Court precedent. Ultimately, however, that would be an academic exercise, because the Supreme Court will have the next opportunity to rule on the CLS Bank matter. However, anyone attempting to “read the tea leaves” here should remember that the Supreme Court is not predictable on this patent-eligibility issue. One need only recall the Supreme Court’s decision in Bilski v. Kappos, 561 U.S. ___, 130 S. Ct. 3218 (2010), which ushered in the current era of unpredictability following the predictable laissez-faire era following State Street Bank & Trust v. Signature Financial Group, Inc., 149 F.3d 1368 (Fed. Cir. 1998).

In order to conform to the plurality in the CLS Bank decision, patent prosecutors should draft patent specifications and claims that include both method and system claims where appropriate. Ultimately, however, claims should be drafted to recite more than merely implementing a method through a computer, such as the ADL claims found invalid in this decision. The claims more likely to succeed under any analysis are those that cover more than simply a process that takes place with a computer which accomplishes something that is conventionally done without a computer. The better approach is to recite a computer-implemented method in only a portion of the claim and then recite further process steps that employ the results of the computer-implemented method to accomplish some specific, real-world task. Of course, it is important to keep in mind the joint-infringement implications when doing so. See a discussion on the latter here.

We invite our readership to stay tuned to Full Disclosure for analyses of CLS Bank and other Supreme Court decisions as they are handed down.
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One of the most significant changes to U.S. Patent and Trademark Office (USPTO) practice in the last couple of years is the USPTO’s treatment of Requests for Continued Examination (RCEs). RCEs are most often submitted in response to a Final Office Action or Notice of Allowance, either of which “closes” prosecution of the application. After a Final Office Action, the examiner typically will allow only very limited claim amendments and will not consider Information Disclosure Statements or any evidence or declarations in support of patentability. An RCE allows the applicant to reopen prosecution in exchange for a fee (currently $1200 for a large entity) so that amendments, arguments, or other documents can be submitted.

A couple of years ago, however, the USPTO eliminated the priority that it previously gave to RCEs in order to dedicate more attention to new applications awaiting examination. As a result, the wait times for processing RCEs became significantly longer, and an RCE backlog was created. The USPTO estimates that it currently takes about seven months for an RCE to be acted upon, but the wait can be as long as two to three years or more in certain cases. Other USPTO statistics, nonetheless, show that nearly 30% of RCEs result directly in allowance of the application, indicating that those RCEs may require little additional work on the examiner’s part.

Because of the RCE backlog, avoiding RCEs where possible or attempting to speed their processing have become important prosecution strategies. To help tackle the RCE backlog, the USPTO has instituted a program called the After Final Consideration Pilot Program 2.0, or AFCP 2.0 for short. The program is currently scheduled to run until September 30, 2014, but may be extended beyond that date in the future. The USPTO’s stated goal for AFCP 2.0 is to reduce the number of RCEs filed and to encourage collaboration between applicants and examiners in order to advance prosecution of applications. The AFCP 2.0 program may be particularly beneficial where the applicant has claim amendments that it believes should lead to allowance of the application.

Under the AFCP 2.0 program, the examiner will be given a limited, additional amount of time to consider an applicant’s response to a Final Office Action and to conduct any further search of the art that may be required. That further examination time would otherwise not be available. To participate in the program, the applicant must first specifically file an AFCP 2.0 request form PTO/SB/434. Second, the response to the Final Rejection must include an amendment to at least one independent claim that does not broaden the scope of the independent claim in any aspect (i.e., by removing or broadening a limitation). Third, the applicant must state in the response that it is willing and available to participate in any interview initiated by the examiner concerning the response. Fourth, while no additional fee is required to participate in the AFCP 2.0 program, any other necessary fees, such as extension-of-time fees, must be submitted with the response.
Action but the examiner did not enter the response or claim amendments into the record. If the applicant believes that the claim amendments were straightforward and could be considered quickly, the applicant could resubmit the response with the AFCP 2.0 request form without paying any further fees beyond the extension-of-time fees.

Once the applicant submits an AFCP 2.0 request, the examiner will determine whether any further search of the art or consideration of the claim amendments can be completed within the allotted time. If not, the examiner will inform the applicant in an Advisory Action that the amendment cannot be considered. If there is sufficient time, the examiner will further examine the application to determine whether the amendment renders the application allowable. If the examiner concludes that the amended application is allowable, the examiner will issue a Notice of Allowance. If the examiner concludes that it is not allowable, the examiner will request an interview with the applicant’s representative, generally by telephone, to discuss the applicant’s response and proposed amendments.

Interviews generally can be very helpful in advancing prosecution of U.S. patent applications as they give the applicant and examiner an opportunity to discuss their points of difference and potentially reach a compromise. Hence, even if the applicant’s AFCP 2.0 request is not successful, the applicant may still get a clearer picture of why the examiner is rejecting the claims, which should help the applicant to determine how to proceed with the application in the future.

In summary, a successful AFCP 2.0 request could avoid the extra time and costs associated with filing an RCE after a Final Office Action and should speed prosecution of the application. But an unsuccessful AFCP 2.0 request may still assist the applicant in better understanding the examiner’s position on the application, which could help the applicant to advance the prosecution in the future. Thus, practitioners should consider using this program, particularly where they believe a straightforward claim amendment should lead to allowance of the application.

Finally, statistics issued by the USPTO indicate that filing a response to a Final Office Action before submitting an RCE is often beneficial in and of itself, regardless of whether the AFCP 2.0 program is used. The USPTO estimates that, during 2011, in 27% of applications in which no response to a Final Office Action was submitted before submission of an RCE, the examiner responded to the RCE by allowing the application to grant. There are circumstances when it is likely best to immediately file an RCE upon receipt of a Final Office Action, such as when the applicant intends to make substantial claim amendments or submit declarations or affidavits in support of patentability, or where the examiner has informed the applicant that a proposed claim amendment will not be considered without an RCE. But these statistics suggest that some RCEs could have been avoided and furthermore provide evidence of the value of the AFCP 2.0 program to applicants.

1 Between the end of 2009 and August 2012, the number of RCEs awaiting examiner action rose from about 20,000 to about 100,000. See http://www.uspto.gov/patents/init_events/rce_outreach.jsp under “statistics related to RCEs” at slide number 1.


3 See http://www.uspto.gov/patents/init_events/rce_outreach.jsp under “statistics related to RCEs” at slide number 5.


5 Up to three hours for utility and plant applications, and up to one hour (plus any time attributed to an interview with the applicant) for design applications. See Guidelines for Consideration of Responses After Final Rejection under 37 CFR 1.116(b) under the After Final Consideration Pilot 2.0 (AFCP 2.0), available at http://www.uspto.gov/patents/init_events/afcp_guidelines.pdf (last visited Mar. 6, 2014).
6 A fillable PDF form may be downloaded at http://www.uspto.gov/forms/sb0434.pdf.

7 78 Fed. Reg. at 29118.

8 See http://www.uspto.gov/patents/init_events/rce_outreach.jsp under “statistics related to RCEs” at slide number 6.
Intermediate Generalization: Amending European Patents and Applications Under Article 123(2) EPC

by Martin D. Hyden and Theresa M. Weisenberger

Article 123(2) EPC stands as the European analogue to the U.S. proscription against adding “new matter” to a U.S. patent or patent application, codified as 35 U.S.C. §§ 132 and 251. Article 123(2) comes into play whenever claims of a European application or patent are amended. In full, Article 123(2) EPC states: “The European patent application or European patent may not be amended in such a way that it contains subject-matter which extends beyond the content of the application as filed.” According to Guidelines H-IV, 2.2, the purpose of Article 123(2) is to prevent an applicant from “improv[ing] his position by adding subject-matter not disclosed in the application as filed, which would give him an unwarranted advantage and could be damaging to the legal security of third parties relying on the content of the original application.” This purpose is similar to the purpose of 35 U.S.C. §§ 132 and 251 as well as the “written description” requirement of 35 U.S.C. § 112(a).

The European standard for new matter under Article 123(2) is much more strict than the U.S. “written description” and “new matter” standards. For example, amendments that take features out of their initial context and combine them with others—so-called “intermediate generalization”—are particularly challenging for European Patent Office (EPO) applications. In some instances, taking characteristics from a working example and combining them with features disclosed in a more general context will not violate Article 123(2) EPC. However, as the EPO Board of Appeals articulated in T 0962/98, intermediate generalization is “only admissible if the skilled person can recognize without any doubt from the application as filed that those characteristics are not closely related to the other characteristics of the working example and apply directly and unambiguously to the more general context.” T 0962/98 Part 2.5. That a skilled person must be able to recognize “without any doubt” that particular characteristics apply “directly and unambiguously” to a general context is a high standard, especially in the field of compositions. In this particular EPO appeal, the claim was drawn to a composition comprising a mixture of surfactants. The Board determined that the disclosure included only one exemplary mixture in accordance with the amended claim, and that, to include one or more of the four surfactants listed in the amended claim, the concentration percentages of the ingredients in the exemplary mixture would have to be modified. Since the disclosure gave no guidance about which components in the exemplary mixture must remain unchanged and which ones can vary, too much doubt existed to survive the Article 123(2) challenge, and the claim was found invalid.

Intermediate generalization is not limited to compositions. Indeed, apparatus claims have been invalidated under this rule. For example, T 0219/09 revoked a patent for a “stick provided with [a] shock-absorber” comprising a grip member that included a shock-absorbing mechanism that could be turned on and off by engaging a pin with a slot. In the original claim, the activation and deactivation of the shock-absorbing mechanism was controlled by the grip member. In one example, the disclosure teaches including two slots shaped as an inverted L with a cam in the upper end and separating the two parts of the inverted L so that the grip member must be lowered and twisted to move the pin beyond the cam to activate the shock absorber. The Board found no indication that other features discussed with the...
cam, like the inverted L-shaped slots, “might somehow be incidental to the on/off mechanism’s proper functioning and could therefore be omitted or modified without consequences for the cam and its arrangement.” T 0219/09 Part 3.3. Since the patent did not claim a specifically shaped slot, nor did it discuss any other specifically shaped slots except in the context of the cam, the amended claim covered a wide variety of cam mechanisms, with any number of slots of various shapes. Thus, the Board found that, although the patent disclosed a cam in one location and disclosed slots of an undefined shape in a different location, the combination of a cam with the slots of various shapes was outside the scope of the original patent.

Thus, the issue presented by intermediate generalization is not whether the claims would encompass something taught by the disclosure or whether portions of the disclosure could be combined to practice the claims. In many cases, such as the shock-absorbing stick of T 0219/09, it is clear that the specific example would be covered by the amended claims. Likewise, in T 0962/98, it was undisputed that the disclosure provided a generic teaching of surfactants as well as the specific example in accordance with the claim (with the exception of the surfactants). Rather, the question is whether the amended claim seeks to claim more than what its specific examples teach. Had the slot shape of the amended claim been specified as an inverted L, as the disclosure taught in connection with the cam, the patent may have survived the Article 123(2) EPC challenge. In T 0962/98, had the disclosure provided guidance as to how to include surfactants in the specific example that embodied the claim, the result may have been different.

Objectionable intermediate generalization seeks to limit claim amendments to those specific embodiments disclosed in the patent. To avoid an Article 123(2) EPC challenge based on intermediate generalization, the specification should provide a teaching or suggestion of how to combine generally discussed features with specific embodiments. Thus, practitioners should review their draft specifications before filing to identify possible additional claim elements or fall-back limitations that they might consider adding to the claims in later amendments, such as to avoid prior art. And they should consider adding further disclosure or additional claims that combine those elements or fall-back limitations with the generally discussed features of the invention before filing their original application. Drafting all original dependent claims in multiple-dependent format or, alternatively, if the first-filed application is a U.S. nonprovisional application (where nested multiple dependent claims are not allowed), including a list of the claimed embodiments in multiple-dependent format within the specification text may also help to avoid the intermediate-generalization problem in some instances.
While interference activity at the U.S. Patent and Trademark Office (USPTO) is winding down due to enactment of the America Invents Act, interferences are still yielding precedent. In a recent appeal from an interference, the Federal Circuit addressed the issues of means-plus-function claiming and the benefit of priority to foreign parent applications. The Federal Circuit’s decision in *EnOcean GmbH v. Face International Corp.*, No. 2012-1645, slip op. (Fed. Cir. Jan. 31, 2014), includes holdings on both issues that practitioners should bear in mind when preparing and prosecuting applications.

The underlying interference involved a patent application filed by EnOcean GmbH and a patent issued to Face International Corporation. Both EnOcean’s application and Face’s patent included claims directed to a self-powered switch that could be used to turn on and off lights, appliances, and other devices without the need for a battery or external power. EnOcean’s application was originally filed in Germany on May 24, 2000, and a similar PCT application was filed on May 21, 2001.

On June 25, 2010, the Board of Patent Appeals and Interferences (the “Board,” now known as the Patent Trial and Appeal Board) declared an interference between EnOcean’s application and Face’s patent. The Board found that all of Face’s claims were invalid under 35 U.S.C. § 103(a) based in part on a published PCT application to Burrow. The Board then applied the presumption under 37 C.F.R. § 41.207(c) that EnOcean’s corresponding claims were unpatentable over Burrow for the same reasons. EnOcean responded by arguing that its application benefited from the priority dates of its German and PCT parent applications, both of which antedated Burrow.

The Board rejected EnOcean’s priority claim and held that its claims were obvious in view of Burrow. In particular, the Board found that the disclosure of a “receiver” in EnOcean’s parent German and PCT applications did not support EnOcean’s claims reciting a “means for receiving” as required by 35 U.S.C. § 112, ¶ 6 (now 35 U.S.C. § 112(f)). The Board also found that certain other claims reciting a “receiver” without the term “means” were also means-plus-function claims, and that the parent German and PCT applications failed to support them as well. Concluding that EnOcean’s application could not claim priority to the parent applications, it held EnOcean’s claims obvious based in part on Burrow. EnOcean appealed.

On appeal, the Federal Circuit first addressed EnOcean’s claims reciting a “receiver” without the term “means.” For example, claim 37 recited “a signal receiver for receiving a first electromagnetic signal transmitted by said first signal transmitter.” Slip op. at 6. The Federal Circuit began by noting that these claims presumptively were not means-plus-function claims because they did not recite the term “means.” While the Federal Circuit noted that the presumption could be overcome, it concluded that it was not overcome in this case, and that “receiver” claims were not means-plus-function claims. In particular, the Federal Circuit referenced the Board’s finding that a “skilled worker would have been familiar with the design and principles of the types of components utilized in the claimed invention, including . . .
receivers.” Id. at 7 (citation omitted). The Federal Circuit also cited the scientific literature and expert declarations of record, which supported EnOcean’s position that a person of ordinary skill in the art would have been able to understand the structure connoted by the recited “receiver.”

The Federal Circuit next considered whether EnOcean’s claims—some of which recited “means” and some of which did not—were entitled to claim priority to the parent German and PCT applications. The Federal Circuit noted that the only portion of the German application that referred to a “receiver” stated:

In this case, a typical scenario is that all the switches, for example light switches, upon actuation, emit one or a plurality of radio frequency telegrams which are received by a single receiver and the latter initiates the corresponding actions (lamp on/off, dimming of lamp, etc.).

Id. at 10 (citation omitted). In view of this disclosure, the Federal Circuit disagreed with the Board’s conclusion that the German application provided insufficient disclosure for the later-filed “means for receiving” and “receiver” claims. The Federal Circuit rejected the Board’s test that the German application must “expressly describe the structure of the receiver” in order to provide adequate written-description support. Id. (citation omitted). Further, the Federal Circuit agreed with EnOcean that “a person of ordinary skill in the art could understand the bounds of the invention merely by reading the term ‘receiver,’ which is present in EnOcean’s German and PCT applications.” Id. at 11. Because “the inventors did not invent the receiver, and the Board found that the structure was well known as of the filing date, the inventors were not obliged . . . to describe . . . the particular appendage to which the improvement refers, nor its mode of connection with the principal machine,” id. (citation omitted). Accordingly, the Federal Circuit found that the Board erred in concluding that both types of EnOcean’s claims were not entitled to priority. The Federal Circuit thus vacated-in-part the Board’s decision (to the extent it related to EnOcean’s “means” and “receiver” claims) and remanded the case to the Board.

Practitioners should keep in mind the Federal Circuit’s holdings both when drafting applications and during prosecution. First, when drafting a specification and claims, practitioners should understand that there is a presumption of means-plus-function treatment based on use of the term “means” in claims. Therefore, practitioners should carefully consider whether to use the term “means” in a claim and, when using it, draft a specification describing various types of structure for that “means” element. Practitioners should also continue to fully describe their inventions in all priority applications. While the claims at issue in EnOcean were found to properly claim priority, draftspersons should prepare specifications and claims with an eye toward avoiding potential disputes about the adequacy of disclosure. These same lessons apply during prosecution as well. Throughout prosecution, when faced with decisions about whether to amend claims and, if so, what language to use, practitioners should be cognizant of the implications of means-plus-function claiming. Practitioners should also consider the implications of priority claims to parent applications if claim amendments are made that change the scope of the claims. Practitioners should also keep in mind that patent offices outside the United States often have stricter requirements than those expressed by the Federal Circuit in this case.

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