

POST-*LIMELIGHT* INTERNET CLAIMING CHALLENGES*

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I. OVERVIEW

The June 2, 2014, Supreme Court decision in *Limelight Networks, Inc. v. Akamai Techs. Co.*, ___ U.S. ___ (June 2, 2014), *rev'g, Akamai Techs. Co. v. Limelight Networks, Inc.*, 692 F.3d 1301, 1305 (Fed. Cir. 2012) (en banc), has eliminated “active inducement” under 35 USC § 271(b) as a way to reach a conclusion of infringement of a multistep internet network method where no single actor performs all steps of the process. The Federal Circuit had previously eliminated direct infringement under 35 USC § 271(a) as basis for liability; this issue was not before the Supreme Court in *Limelight*. Given that the Supreme Court has now thrown out “active inducement” under 35 USC § 271(b) a remedy, this paper looks to the continued drafting and enforcement challenges for multi-step process claims under the law of “direct infringement” under 35 USC § 271(a).

The starting point for this paper is to consider the status of the law of “direct infringement” in the wake of *Limelight*. See § II, “*Direct Infringement*” Law after *Limelight*..

Limitations to the scope of infringement in *Limelight* and other cases involving multi-step internet network process claims represent a fraction of the case law under the “all elements” rule. See § III, *The “All Elements” Rule of the Federal Circuit*. In *Pennwalt* – the first highly divided and controversial *en banc* patent decision of the Federal Circuit – the harsh realities of the “all elements” rule were exposed. See § III-A, *The Harsh Reality of the Pennwalt Rule*. With the exception of one member of the *Pennwalt* court (who continues her refusal to accept the “all elements” rule), there has been general acceptance of *Pennwalt* by the Federal Circuit. See § III-B, *Judicial Acceptance of the Pennwalt Rule*.

While relatively new to internet technology, the “all elements” rule has a rich case law history. *See* § III-C, *The “All Elements” Rule in All Technologies*.

To be sure, internet network claiming to meet the “all elements” rule requires more careful craftsmanship than in other technologies. *See* § IV, *Internet Claiming, the Need for Language Precision*.

The debate will continue whether the “all elements” rule should survive particularly as long as the seniormost member of the Court continues to express her independent voice. In any debate, the competing policy interests will need to be considered. *See* § V, *Public Policy Concerns*.

II. “DIRECT INFRINGEMENT” LAW AFTER *LIMELIGHT*

Limelight leaves the law of direct infringement under 35 USC § 271(a) untouched: The opinion concludes with the statement that “the question on which we granted certiorari did not involve §271(a)...Our decision on the §271(b) question necessitates a remand to the Federal Circuit [which] will have the opportunity to revisit the §271(a) question if it so chooses.”

The law of direct infringement as stated in the *en banc* opinion below thus remains unchanged: “When a single actor commits all the elements of infringement, that actor is liable for direct infringement under 35 U.S.C. § 271(a).” *Akamai*, 692 F.3d at 1305. This was *dictum* because the issue was not addressed. *Akamai*, 692 F.3d at 1306 (“Much of the briefing in these cases has been directed to the question whether direct infringement can be found when no single entity performs all of the claimed steps of the patent. *It is not necessary for us to resolve*

that issue today because we find that these cases and cases like them can be resolved through an application of the doctrine of induced infringement.

The *Aristocrat Technologies* panel explained that “[i]n the recent en banc decision of this court in *Akamai*, we addressed the requirements for infringement under 35 U.S.C. § 271(b) but found that ‘we have no occasion at this time to revisit any of those principles regarding the law of divided infringement as it applies to liability for direct infringement under 35 U.S.C. § 271(a).’” *Aristocrat Techs. Austl. PTY Ltd. v. Int’l Game Tech.*, 709 F.3d 1348, 1362 (Fed. Cir. 2013)(O’Malley, J.).

In the interval between the *en banc* opinion below and the Supreme Court decision, the law of direct infringement was explained in *Aristocrat Technologies* and *Move v. Real Estate Alliance. Aristocrat Techs., supra; Move, Inc. v. Real Estate Alliance Ltd.*, 709 F.3d 1117 (Fed. Cir. 2013)(Lourie, J.). As stated in *Aristocrat Technologies*, “[t]o establish liability for direct infringement of a claimed method or process under 35 U.S.C. § 271(a), a patentee must prove that each and every step of the method or process was performed.” *Aristocrat Technologies*, 709 F.3d at 1362 (citing *BMC Resources, Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1381 (Fed. Cir. 2007)(Rader, J.)); *Cheese Systems, Inc. v. Tetra Pak Cheese & Powder Systems, Inc.* 725 F.3d 1341, 1348 (Fed. Cir. 2013)(Rader, C.J.)(citing *BMC Resources*, 498 F.3d at 1381).

Thus, *Akamai* maintains the *status quo* that “[t]o establish liability for direct infringement of a claimed method or process under 35 U.S.C. § 271(a), a patentee must prove that each and every step of the method or process was performed.” *Move v. Real Estate Alliance*, 709 F.3d at 1122 (citing *Akamai*, 692 F.3d at 1307).

III. THE “ALL ELEMENTS” RULE OF THE FEDERAL CIRCUIT

A. The Harsh Reality of the *Pennwalt* Rule

The law of direct infringement for a process claim that a single actor must perform “all elements” of the claim is part of the broader “all elements” rule of patent infringement.

In the case of process inventions – whether in an older technology or a modern internet network method – many such inventions have a sequence of several steps. In any multi-step *claimed* invention there is infringement *only* where each and every element of the claimed invention is practiced by the accused infringer. The only exception is that an *equivalent* of one or more of the elements may be substituted for a stated element which can result in a finding of infringement under the doctrine of equivalents: But, total elimination of any element without replacement by an equivalent leads to a conclusion of noninfringement.

In *Limelight* the “all elements” rule is explained in the context of method patents:

“A method patent claims a number of steps; under this Court’s case law, the patent is not infringed unless all the steps are carried out. See, *e.g.*, *Aro [Mfg. Co. v. Convertible Top Replacement Co.]*, 365 U.S. 336, 344 (1961) (a “patent covers only the totality of the elements in the claim and . . . no element, separately viewed, is within the grant”). This principle follows ineluctably from what a patent is: the conferral of rights in a particular claimed set of elements. “Each element contained in a patent claim is deemed material to defining the scope of the patented invention,” *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U. S. 17, 29 (1997), and a patentee’s rights extend only to the claimed combination of elements, and no further.”

Limelight, ___ U.S. at ____.

The classic application of the “all elements” rule to a conventional process is the *Pennwalt* “fruit sorter” case. *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931 (Fed.Cir.1987) (*en banc*)(Bissell, J.). Patentee Pennwalt claimed an automated assembly line fruit sorter: Fruit was processed through a claimed multistep process; each step constituted a separate element of the claimed invention. Two of the elements in the claim were *unnecessary* for successful operation of the Pennwalt fruit sorter system. The accused infringer quite naturally *eliminated* the two unnecessary steps for his process and achieved equivalent results to the patented claimed invention.

In terms of the *result* achieved by the accused infringer, the *identical* goal was as if all of the steps of the claimed invention had been used. But, because not all of the *claimed elements* were practiced by the accused infringer, there could be no infringement under the “all elements” rule.

B. Judicial Acceptance of the *Pennwalt* Rule

There were deep divisions within the *en banc* court in *Pennwalt* led by Circuit Judge Newman – the same jurist who now, years later, once again repudiated the “all elements” rule in the *On Demand* deviation from precedent that led ultimately to *Limelight*. *On Demand Machine Corp. v. Ingram Industries, Inc.*, 442 F.3d 1331 (Fed. Cir. 2006)(Newman, J.), *repudiated*, *BMC Resources*, 498 F.3d at 1380-81.

While the *en banc* panel in *Pennwalt* was divided, with the exception of the differing voice in *Pennwalt* that continues to the present day, the majority view in *Pennwalt* has received overwhelming support by panels of the Federal Circuit in the nearly thirty years since that case was decided:

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“Under the ‘all elements’ rule, the accused device must contain each limitation of the claim, either literally or by an equivalent, to be infringing.” *TecSec, Inc. v. IBM Corp.*, 731 F.3d 1336, 1351 n.2 (Fed. Cir. 2013)(Linn, J.)(citing *TIP Sys., LLC v. Phillips & Brooks/Gladwin, Inc.*, 529 F.3d 1364, 1379 (Fed. Cir. 2008), quoting *Freedman Seating Co. v. Am. Seating Co.*, 420 F.3d 1350, 1358 (Fed. Cir. 2005)).

“[L]iteral infringement ‘occurs when every limitation recited in the claim appears in the accused device, i.e., when ‘the properly construed claim reads on the accused device exactly.’” *TecSec v. IBM*, 731 F.3d at 1351 n.2 (quoting *Demarini Sports v. Worth*, 239 F.3d 1314, 1331 (Fed. Cir. 2001), quoting *Amhil Enters., Ltd. v. Wawa, Inc.*, 81 F.3d 1554, 1562 (Fed. Cir. 1996)).

As explained in the Linn dissent in *Akamai*, “[p]racticizing less than all elements of a claim is *not* patent infringement under § 271(a). *Warner-Jenkinson Co. v. Hilton Davis Corp.*, 520 U.S. 17, 40 (1997); *Aro [Mfg. Co. v. Convertible Top Replacement Co.]*, 365 U.S. 336, 340 (1961)] (‘The patent is for a combination only. Since none of the separate elements of the combination is claimed as the invention, none of them when dealt with separately is protected by the patent monopoly.’ (quoting *Mercoid [Corp. v. Mid-Continent Investment Co.]*, 320 U.S. 661, 667 (1944))).” *Akamai Techs., Inc. v. Limelight Networks, Inc.*, 692 F.3d 1301, 1345 (Fed. Cir. 2012)(en banc)(Linn, J., joined by Dyk, Prost, O’Malley, JJ.), *rev’d and remanded, Limelight Networks, supra* (original emphasis).

To be sure, “[m]ost often, the ‘all elements’ rule serves to prevent vitiation of a claim limitation when the infringement theory is based on the doctrine of equivalents.... *Trading Techs. Int'l, Inc. v. eSpeed, Inc.*, 595 F.3d 1340, 1355 (Fed. Cir. 2010) (quoting in *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 39 n.8 (1997)); see also *TIP*, 529 F.3d at 1379; *Freedman*, 420 F.3d at 1358; *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 949-50 (Fed. Cir. 1987)(en banc)(Nies, J., additional views).” *TecSec v. IBM*, 731 F.3d at 1351 n.2. Phrased differently, “[u]nder the ‘all-elements rule,’ a patentee may not assert ‘a theory of equivalen[ce] [that] would entirely vitiate a particular claim element.”” *Trading Techs. Int'l, Inc. v. eSpeed, Inc.*, 595 F.3d 1340, 1355 (Fed. Cir. 2010)(Rader, J.)(quoting *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 39 n.8 (1997)).

C. The “All Elements” Rule in All Technologies

The example of internet network claim shortcomings is but a small microcosm of the frequent failure of patentees to provide claims of any value. There is case after case of a truly meritorious invention that is patentable, yet the claim draftsman has either made a serious grammatical mistake such as failing to provide claim wording to capture a literally described embodiment in the specification as in *Malta v. Schulmerich Carillons, Inc.*, 952 F.2d 1320 (Fed. Cir. 1991)(Rich, J.), or where there is a grammatical mistake such as where the preposition “to” was used instead of “at” as in *Chef America Inc. v. Lamb Weston, Inc.*, 358 F.3d 1371, 1373 (Fed.Cir.2004).

For example, sometimes, even a preferred embodiment is copied by the accused infringer, one that is fully *disclosed* in the specification; but, the claim wording comes up short as in *Malta v. Schulmerich Carillons*. Even here, the debate continued; the same jurist who was critical of the decision in *Pennwalt* for not reaching equivalence based on the invention as a whole reprised that opinion in her dissent in *Malta*; she again argued that the Court should be “[l]ooking ... at the invention as a whole....” *Malta v. Schulmerich Carillons*, 952 F.2d at 1340 (Newman, J., dissenting).

That every patentable invention should somehow have an enforceable right is difficult to square with the numerous precedents that have found valuable inventions to lack any scope of protection due to oversights or mistakes made by the patent attorney. For example, in *Chef America*, the patentee claimed heating bakery dough “to” near-incineration temperatures (instead of flash-heating “at” such temperatures). Instead of providing a bakery product with “a light, flaky, crispy texture,” ... which the patented process is intended to provide, the resultant product of such heating will be something that... resembles a charcoal briquet.” *Chef America*, 358 F.3d at 1373. But, “[even ‘a nonsensical result does not require the court to redraft the claims... patent. Rather, where... claims are susceptible to only one reasonable interpretation and that interpretation results in a nonsensical construction of the claim as a whole, the claim must be invalidated.” *Chef Ameica*, 358 F.23d at 1374 (quoting *Process Control Corp. v. Hydreclaim Corp.*, 190 F.3d 1350, 1357 (Fed.Cir.1999)).

IV. INTERNET CLAIMING, THE NEED FOR LANGUAGE PRECISION

The “all elements” rule is undeniably harsh and unforgiving. The patent applicant who starts the drafting process with the specification and enumerates the various elements that make up his new technology and then merely recites all the features in his claim may end up a victim of the “all elements” rule.

The “all elements” rule in the context of internet network claiming is one that Donald R. Dunner has described as the challenge of “wordsmithing”. As petitioner who successfully gained *en banc* review in the *Akamai* case in the proceedings below, the leading Federal Circuit appellate specialist made the argument that “[r]equiring [] awkward wordsmithing by the claim drafter goes against a patentee's obligation to clearly claim the invention.” Donald R. Dunner *et al.*, *Combined Petition for Panel Rehearing and Rehearing En Banc of Plaintiff-Appellant Akamai Technologies, Inc.*

The multiple steps of an internet network (or any other) process must be stated in terms of the actions of one actor who is then the direct infringer under 35 USC § 271(a).

Sophisticated practitioners have long practiced in compliance with the “all elements” rule: “As commentators have recognized, it has been established practice for many years for patent attorneys to draft method claims from the perspective of a single actor. *See* Robert C. Faber, *Faber on Mechanics of Patent Claim Drafting* § 7:3, at 7-7 (6th ed. 2012) (‘Advice by this author for drafting a method claim remains as previously. Draft at least some of the method claims to focus on steps to be performed by a single entity.’); Harold C. Wegner, *E-Business Patent Infringement: Quest for a Direct Infringement Claim Model* 14 (SOFTIC 2001 Symposium) (noting the need to draft claims to have ‘a single, direct

infringer for every claim’), *available at*

http://www.softic.or.jp/symposium/open_materials/10th/en/wegner-en.pdf. Such

drafting adds precision, making clear not just *what must be done* but what each potential infringer *must do* to infringe. By contrast, patents that describe desired results without precisely defining how a particular step of the method is performed

‘may leave the outer boundaries of the claim difficult to decipher.’ Federal Trade Comm’n, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition* 100 (Mar. 2011), *available at*

<http://www.ftc.gov/reports/evolving-ip-marketplace-aligning-patent-notice-remedies-competition>; *see also* Executive Office of the President, *Patent Assertion and U.S. Innovation* 7-9 (June 2013) (‘*Innovation Report*’), *available at*

http://www.whitehouse.gov/sites/default/files/docs/patent_report.pdf; James

Bessen & Michael J. Meurer, *Patent Failure: How Judges, Bureaucrats, and*

Lawyers Put Innovators at Risk 219 (2008).” *Limelight*, Initial Brief: Appellant-Petitioner, February 24, 2014.

The challenge of crafting claims to create direct infringement by a single actor is one of language: Consider the following sequence of steps and the two ways of claiming the steps where a straightforward narrative involves the actions of two parties (thus precluding direct infringement) whereas the same steps are restructured to focus on a single actor in the second sequence (thus meeting the goal of direct infringement):

Narrative Without Infringement	Single Actor -- Infringement
<p>A method of transferring money to a person at a remote terminal wherein</p> <p>(a) the person at the remote terminal inputs a series of keystrokes into a remote computer terminal which then transmits a unique signal to a central server; and</p> <p>(b) the central server sends a signal to the remote terminal to distribute a fixed amount of money based upon computations at the central server.</p>	<p>A method of transferring money to a person at a remote terminal wherein</p> <p>(a) the person at the remote terminal inputs a series of keystrokes into a remote computer terminal which then transmits a unique signal to a central server; and</p> <p>(b) the person receives from the central server [<i>sends</i>] a signal [<i>to the remote terminal</i>] to distribute a fixed amount of money based upon computations at the central server.</p>

V. PUBLIC POLICY CONCERNS

A. Clear Boundaries to Encourage Innovation

To understand *why* seemingly harsh doctrines such as the “all elements” rule exist requires an understanding of the Constitutional object of the Patent Clause “to Promote the Progress of *** the Useful Arts”. Encouragement of new innovation on the shoulders of pioneer patentees is facilitated by a system mandating clear claim boundaries to guide downstream innovators to areas open to patent-free innovation.

In parallel with the decision in *Limelight* the Court emphasized the need for claiming clarity in the contemporaneously decided *Nautilus*: “[W]e hold that a patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus*, ___ U.S. at _____. Thus “a patent must be precise enough to afford clear notice of what is claimed, thereby “‘appris[ing] the public of what is still open to them.’” *Markman* [*v. Westview Instruments, Inc.*, 517 U. S. 370, 373 (1996)](quoting *McClain v. Ortmayer*, 141 U. S. 419, 424 (1891)). Otherwise there would be “[a] zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims.” *United Carbon Co. v. Binney & Smith Co.*, 317 U. S. 228, 236 (1942).” *Nautilus*, ___ U.S. at _____.

That every patentable invention should somehow have an enforceable right is difficult to square with the numerous precedents that have found valuable inventions to lack any scope of protection due to oversights or mistakes made by the patent attorney. For example, in *Chef America*, the patentee claimed heating bakery dough “to” near-incineration temperatures (instead of flash-heating “at” such temperatures). Instead of providing a bakery product with “‘a light, flaky, crispy texture,” ... which the patented process is intended to provide, the resultant product of such heating will be something that... resembles a charcoal briquet.” *Chef America*, 358 F.3d at 1373. But, “[even ‘a nonsensical result does not require the court to redraft the claims... patent. Rather, where... claims are susceptible to only one reasonable interpretation and that interpretation results in a nonsensical construction of the claim as a whole, the claim must be invalidated.”” *Chef America*, 358 F.3d at 1374 (quoting *Process Control Corp. v. Hydreclaim Corp.*, 190 F.3d 1350, 1357 (Fed.Cir.1999)).

B. “Cold Comfort” that Better Claims Can be Drafted

A surprisingly large segment of the patent community has run afoul of the “all elements” rule. Intellectual Property Owners has taken up the cause for the patentees who have been left with worthless claims: “[T]he advice on better claiming is cold comfort for owners of the many thousands of already-issued patents.” Unsuccessful brief *amicus curiae* of the Intellectual Property Owners Association supporting petition for rehearing en banc in *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1327 (Fed.Cir.2008)(discussing the statement by the Court in *BMC Resources*, 498 F.3d at 1381, that proper claim drafting avoids the single infringer issue).

C. Reissue to Fix Bad Claims

There are undoubtedly a significant number of patents that disclose but do not properly claim important subject matter thanks to violation of the “all elements” rule. Particularly for patents granted within the past two years, it may not be too late to redraft the claims in a reissue application to fit the single actor “all elements” rule. (Claims that broaden the scope of protection in any way are barred in a reissue filed more than two years after grant.)

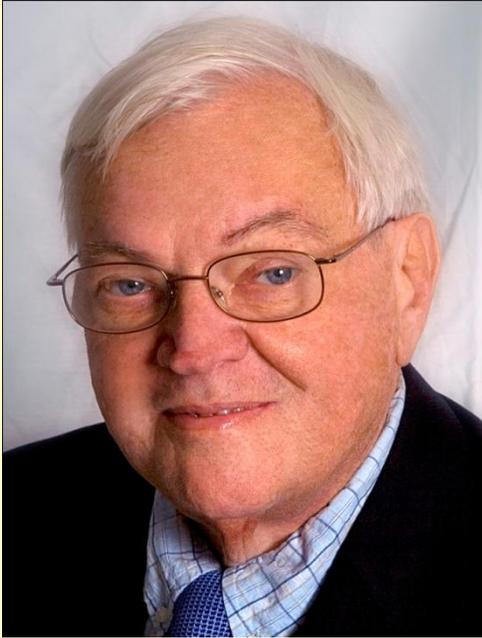
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VI. CONCLUSION

Confusion over the “all elements” rule has been the order of the day for the eight years since *On Demand* opened the door through *dictum* that there can be direct infringement of a multi-step process without a single direct infringer. Whether *Limelight* is the final chapter or not now depends upon what the *en banc* Court does on remand: Will the Federal Circuit reopen the issue of direct infringement that was ducked by the *en banc* panel leading up to *Limelight*? This would then close this chapter of uncertainty. Or, will the Federal Circuit choose to answer the question of direct infringement which it dodged in its *Akamai* decision which focused solely on the issue of inducement under 35 USC § 271(b)?

As a practical matter, patentees who have the option to cure claiming mistakes through a reissue should consider this option without waiting for the Federal Circuit to act.

About the Author



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Prof. Wegner's patent career commenced with service at the U.S. Department of Commerce as a Patent Examiner.

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After eight years on the adjunct faculty at the Georgetown University Law Center, Prof. Wegner commenced a twenty year affiliation with the George Washington University Law School; at GW he was Director of the Intellectual Property Law Program and Professor of Law. His involvement with other academic institutions has included service as a Visiting Professor at Tokyo University.

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