IP Theory

Volume 1
Issue 2 *Reflections on the Patent Scope Revisited Conference*

Article 7

2010

Complex Economics and Patent Remedies

John M. Golden
The University of Texas School of Law, jgolden@law.utexas.edu

iPtheory

Volume 1: Issue 2

Complex Economics *and Patent Remedies*

John M. Golden*

Robert Merges and Richard Nelson's 1990 article *On the Complex Economics of Patent Scope*[1] focuses attention on patent rights' capacity to slow innovative progress by "taxing" or otherwise impeding the activities of follow-on innovators.[2] They argue that such dynamic "drag" from patent rights[3] can be especially problematic with respect to "cumulative technologies," which might be crudely described as technologies in which significant advances tend to involve a multiplicity of substantially novel features.[4] Broad patent scope can decelerate the development of such a technology by "reduc[ing] competition in the market for improvements to the patented technology."[5] The result can be a relatively "sluggish" rate of further technological advance.[6]

Current debates over the proper remedies for patent infringement have a strong relation to Merges and Nelson's concerns with potential dynamic inefficiencies of patent rights. One not-so-subtle insight underlying modern remedies debates is that, even if follow-on activity infringes a patent's scope, the patent might do little to limit that activity if remedies for patent infringement are sufficiently limited. If courts rarely issue injunctions to enforce patents and rarely issue damage awards that are more than a small fraction of an infringer's profits, even broad patents on fundamental innovations might not significantly chill follow-on innovation.

The complementary nature of Merges and Nelson's concern with patent scope and present-day concerns with patent remedies recalls an old lesson: the breadth of legal entitlements

---

* Loomer Family Professor in Law, University of Texas School of Law. I would like to thank the participants in, and the organizers of, the September 2011 Patent Scope Revisited Conference at Indiana University Maurer School of Law.

1. Robert P. Merges & Richard R. Nelson, *On the Complex Economics of Patent Scope*, 90 Colum. L. Rev. 839 (1990).
2. *See id*. at 907 (describing patentees who license broadly and indiscriminately "as tollkeepers, not coordinators").
3. *See* John M. Golden, *Innovation Dynamics, Patents, and Dynamic-Elasticity Tests for the Promotion of Progress*, 24 Harv. J.L. & Tech. (forthcoming 2010) (presenting "a model for innovative progress in which the rate of progress is determined by a combination of accelerant 'pushes' and decelerant 'drags'").
4. *See* Merges & Nelson, *supra* note 1, at 881 ("In many cases [a cumulative] technology . . . defines a complex system with many components, subcomponents and parts, and technical advance may proceed on a number of different fronts at once.").
5. *Id*. at 843.
6. *Id*. at 908.

and the remedies for their violation can be viewed as separately tunable factors in the achievement of social goals.[7] Concern with patent scope can be associated with Guido Calabresi and Douglas Melamed's "problem of 'entitlement,'" the question of "which side to favor" in a legal dispute.[8] Concern with patent remedies can be associated with Calabresi and Melamed's discussion of the choice between an objectively compensatory "liability rule" and an alternative "property rule," a question about "the manner in which entitlements are protected."[9]

Given the complementary nature of questions about patent scope and questions about patent remedies, what does Merges and Nelson's article suggest about how to resolve debates over the latter? First, Merges and Nelson's discussion of distinct technology and industry types indicates that, like doctrines regulating patent scope, doctrines governing patent remedies will likely have distinct, context-dependent effects on different technologies' rates of innovative progress. Just as a "tradition of licensing" within a given economic sector might "mitigat[e] the potential impact of broad patents,"[10] such a tradition might alleviate concerns that robust property-rule remedies will lead to socially undesirable outcomes.[11] Thus, Merges and Nelson's argument that courts should use "discretion" to determine patent scope in a way that is sensitive to technological and industrial context[12] seems readily extendable to debates over patent remedies.

As with patent scope, courts have many ways in which they can regulate patent remedies. In *eBay Inc. v. MercExchange, L.L.C.*,[13] the Supreme Court reemphasized the discretion that district court judges have in deciding whether to grant or to deny injunctive relief.[14] Courts also have substantial discretion in determining the scope of the injunctions

---

7. *See generally* Douglas Laycock, Modern American Remedies 307 (4th ed. 2010) (describing two traditions with respect to the scope of injunctive relief: (1) "the rightful-position approach" and (2) "the equitable discretion approach," with an "academic formulation" of the latter "claim[ing] that, at least in public law litigation, 'right and remedy are pretty thoroughly disconnected'" (quoting Abram Chayes, *The Role of the Judge in Public Law Litigation*, 89 Harv. L. Rev. 1281, 1293 (1976)).
8. Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 Harv. L. Rev. 1089, 1090 (1972).
9. *Id.* at 1092 ("Whenever someone may destroy the initial entitlement if he is willing to pay an objectively determined value for it, an entitlement is protected by a liability rule.").
10. Merges & Nelson, *supra* note 1, at 883.
11. Calabresi & Melamed, *supra* note 8, at 1118 ("Wherever transactions between [two parties of concern] are easy, and wherever economic efficiency is our goal, we could employ entitlements protected by property rules even though we would not be sure that the entitlement chosen was the right one. Transactions . . . would cure the error.").
12. *Id.* at 841 (describing the project being undertaken as one of "how to exercise . . . discretion" in relation to doctrines regulating patent scope).
13. 547 U.S. 388 (2006).
14. *Id.* at 394 ("We hold only that the decision whether to grant or deny injunctive relief rests within the equitable discretion of the district courts, and that such discretion must be exercised consistent with traditional principles of equity . . . .").

that they issue,[15] and in determining how to enforce those injunctions through contempt proceedings.[16] Although determination of damages is typically a question for juries,[17] a district court can do much to regulate the evidence and experts,[18] as well as the instructions and verdict forms,[19] that inform juries' decisions. Moreover, courts can vacate awards of damages that they believe to lack reasonable support in the evidence.[20] Finally, courts have significant control over special forms of damages. After a jury makes a finding of willful infringement, a district court has discretion to decide by what factor—from one to three—to multiply compensatory damages.[21] Likewise, district courts have power to award attorney fees "in exceptional cases."[22] When a district court denies a permanent injunction, the court can award an "ongoing royalty."[23]

---

15. Int'l Rectifier Corp. v. Samsung Elecs. Co., 361 F.3d 1355, 1359 (Fed. Cir. 2004) ("District courts have broad discretion in determining the scope of injunctive relief . . . ."). *See generally* Hecht Co. v. Bowles, 321 U.S. 321, 329 (1944) ("The essence of equity jurisdiction has been the power of the Chancellor to do equity and to mould each decree to the necessities of the particular case.").
16. *See, e.g.*, *Int'l Rectifier*, 361 F.3d at 1359 ("[W]e review a district court's finding of contempt of an injunction, by infringement, for an abuse of discretion . . . .").
17. *See* i4i Ltd. P'ship v. Microsoft Corp., 598 F.3d 831, 858 (Fed. Cir.) ("Given the intensely factual nature of a damages determination and our deferential standard of review, we are not in a position to second-guess or substitute our judgment for the jury's."), *cert. granted on other grounds*, 131 S. Ct. 647 (2010).
18. *Id.* at 852 ("We review evidentiary rulings for abuse of discretion."); *see also* SEB S.A. v. Montgomery Ward & Co., 594 F.3d 1360, 1373 (Fed. Cir. 2010) ("District courts enjoy wide latitude to determine admissibility and the mode and order of evidentiary presentations." (internal quotation marks omitted)); *cf.* Uniloc USA, Inc. v. Microsoft Corp., Nos. 2010-1035, -1055, slip op. at 41 (Fed. Cir. Jan. 4, 2011) ("Evidence relying on the 25 percent rule of thumb [for a reasonable royalty] is . . . inadmissible . . . because it fails to tie a reasonable royalty base to the facts of the case at issue.").
19. *Compare SEB*, 594 F.3d at 1374 ("The verdict form itself suggests that the jury was asked to base its damages calculations on inducement only."), *with id.* ("On the other hand, the jury instructions also indicate that the jury could assess damages for direct infringement.").
20. *See* ResQNet.com, Inc. v. Lansa, Inc., 594 F.3d 860, 868 (Fed. Cir. 2010) ("Because the district court's [damages] award relied on speculative and unreliable evidence divorced from proof of economic harm linked to the claimed invention and is inconsistent with sound damages jurisprudence, this court vacates the damages award and remands."). In a span of two years, the U.S. Court of Appeals for the Federal Circuit has vacated multiple jury awards in patent cases. *See* Wordtech Sys., Inc. v. Integrated Networks Solutions, Inc., 609 F.3d 1308, 1322 (Fed. Cir. 2010) ("Because the [jury's] verdict was clearly not supported by the evidence and based only on speculation or guesswork, we reverse . . . and remand for a new trial on damages." (internal citation and quotation marks omitted)); Lucent Techs., Inc. v. Gateway, Inc., 580 F.3d 1301, 1324 (Fed. Cir. 2009) ("We agree . . . with Microsoft's argument that substantial evidence does not support the jury's verdict of a lump-sum royalty payment of $357,693,056.18.").
21. 35 U.S.C. § 284 ("[T]he court may increase the damages up to three times the amount found or assessed."); *see also i4i*, 598 F.3d at 858 ("A finding of willful infringement is a prerequisite to the award of enhanced damages.").
22. 35 U.S.C. § 285 ("The court in exceptional cases may award reasonable attorney fees to the prevailing party."); *see also* ICU Med., Inc. v. Alaris Med. Sys., Inc., 558 F.3d 1368, 1380 (Fed. Cir. 2009) ("Having determined that this case is exceptional, the district court appropriately exercised its discretion in awarding attorney fees . . . .").
23. Paice LLC v. Toyota Motor Corp., 504 F.3d 1293, 1314 (Fed. Cir. 2007) ("Under some circumstances, awarding an ongoing royalty for patent infringement in lieu of an injunction may be appropriate.").

How should courts use their power to regulate patent remedies? Extrapolation from Merges and Nelson's analysis regarding patent scope suggests that welfare-maximizing answers should be sensitive to technologic and industrial circumstance. In industries with a well-established and generally pervasive culture of licensing on reasonable terms, relatively strong patent remedies might not present much of a barrier to the competitive markets for innovation that Merges and Nelson generally favor.[24] Likewise, with respect to technologies in which individual innovations tend "not [to] point the way to wide ranging subsequent technical advances," strong remedies that give "a proprietary lock on the invention" might not "serious[ly] hind[er] inventive work by many other firms."[25]

Regarding more specific questions of how courts should craft or curtail patent remedies, Merges and Nelson's ultimately moderate approach to restricting patent scope might suggest a similarly moderate policy of curtailing remedies in a limited number of relatively extreme situations, ones in which patent rights threaten to severely damp competitive or innovative activity. Merges and Nelson stress that their proposed "doctrinal modifications . . . will apply only to the broader claims of a small number of patents, primarily those on pioneering breakthroughs."[26] They contend that, "[w]ithout extensively reducing the pioneer's incentives, the law should attempt at the margin to favor a competitive environment for improvements."[27] Merges and Nelson thus appear to have faith that, by acting to forestall or to eliminate a relatively discrete set of competitive bottlenecks, patent-law decision-makers can do much good while doing comparatively little harm. They hesitate to suggest much more broad-based interventions.

The modesty of Merges and Nelson's policy proposals contrasts with the dramatic nature of some recent calls for sweeping overhaul of patent remedies, calls that at least sometimes seem to chase a goal of remedies measured with Swiss-watch-like precision.[28] Such reforms would likely be benign if they matched up well with the competences of judges and juries. In the absence of concern for cost or possible judge or jury error, adoption of legal rules that demand exact precision in the award of equitable or monetary remedies might seem merely just. In the abstract, there might be little apparent reason to oppose legal requirements that (1) a court issue an injunction if and only if the movant

---

24. *See* Merges & Nelson, *supra* note 1, at 899 ("Of course there are patent suits and short-term hold ups in the field of bulk chemical process technology, but these problems are usually settled and licensing is a general practice."); *see also id*. at 883 (describing a "tradition of licensing" as "mitigat[ing] the potential impact of broad patents"). *See generally id*. at 908 (stating a "basic conclusion" that, particularly with respect to "cumulative technologies," "multiple and competitive sources of invention are socially preferable").
25. *Id*. at 880-81.
26. *Id*. at 916.
27. *Id*. at 843.
28. Various recent congressional bills have, for example, proposed blanket adoption of a single standard approach for calculating reasonable-royalty damages that might be viewed as grasping at such an ideal. *See* John M. Golden, *Principles for Patent Remedies*, 88 Tex. L. Rev. 505, 582-86 (2010) (discussing legislative proposals relating to damage awards for patent infringement).

has provided decisive proof that the injunction is, on net, socially desirable; and (2) court-awarded compensatory damages reflect an exact assessment of how much additional value was added to a product or process by its infringing aspects.

But in one legal area after another, the law has recognized that courts cannot be expected to act so precisely. Indeed, it has long been appreciated that pretensions at precision can generate not only wasteful cost but even systematically inferior outcomes.[29] Hence, courts frequently have gravitated toward ways of resolving legal disputes that avoid demands for absolute precision. For example, in reviewing an administrative agency's legal understandings,[30] Congress's economic policy choices,[31] or the validity of a contract of doubtful fairness,[32] courts commonly focus not on whether the relevant legal understanding, policy choice, or contractual arrangement is optimal, but instead on whether it is in some sense grossly wrong. The intuition seems to be that courts can do significant good by picking out extreme cases of error or dysfunction even when they are incompetent to give precise answers on questions of optimality or value. Merges and Nelson's measured policy prescriptions comport with a corresponding intuition that courts might best focus on avoiding grossly disproportionate remedies, rather than engaging in the quixotic pursuit of absolutely precise ones.[33]

Sweeping reform is sometimes beneficial or even necessary. But at times, a careful, incremental shift can resolve foreseeable problems with much less risk of great, unintended

---

29. *Cf.* RESTATEMENT (SECOND) OF CONTRACTS § 352 cmt. a ("A party who has, by his breach, forced the injured party to seek compensation in damages should not be allowed to profit from his breach where it is established that a significant loss has occurred. . . . Damages need not be calculable with mathematical accuracy and are often at best approximate."); 1 DAN B. DOBBS, DOBBS LAW OF REMEDIES § 3.3(8), at 317 (2d ed. 1993) ("Accuracy in measurement is a desirable goal, but it should not lead us to forget the definitional and policy elements involved, nor the limits of the enterprise.").
30. Chevron, U.S.A., Inc. v. Natural Res. Def. Council, 467 U.S. 837, 844 (1984) (holding that, where Congress has implicitly delegated interpretive power to an agency, "a court may not substitute its own construction of a statutory provision for a reasonable interpretation made by the administrator of [the] agency").
31. F.C.C. v. Beach Commc'ns, Inc., 508 U.S. 307, 313 (1993) ("In areas of social and economic policy, a statutory classification that neither proceeds along suspect lines nor infringes fundamental constitutional rights must be upheld against equal protection challenge if there is any reasonably conceivable state of facts that could provide a rational basis for the classification.").
32. RESTATEMENT (SECOND) OF CONTRACTS § 208 cmt. c ("Inadequacy of consideration does not of itself invalidate a bargain, but gross disparity in the values exchanged may be an important factor in a determination that a contract is unconscionable and may be sufficient ground, without more, for denying specific performance."); *see also id.* at § 208 cmt. b ("Traditionally, a bargain was said to be unconscionable in an action at law if it was 'such as no man in his senses and not under delusion would make on the one hand, and as no honest and fair man would accept on the other.'").
33. *See* John M. Golden, *"Patent Trolls" and Patent Remedies*, 85 TEX. L. REV. 2111, 2149 n.138 (2007) (suggesting that courts might deny injunctions "in circumstances where the costs of halting infringement greatly exceed both (a) reasonable estimates of the positive value of the infringement and (b) any harm to the right holder other than its failure to recover from the infringer the positive value of infringement or the negative value associated with the cost of terminating infringement").

harm. Further, a small change today can prepare the way for a more substantial transformation tomorrow. As the well-funded clamor for immediate, dramatic reform of patent remedies continues,[34] the moderation of Merges and Nelson's policy prescriptions might be worth keeping in mind. ■

34. *See* Golden, *supra* note 28, at 507 (noting industry lobbying efforts relating to questions of damages for patent infringement).