

## Principles for Patent Remedies

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*Once a joint domain of inertia and arcana, questions about remedies for patent infringement now generate heated public debate. A recent Supreme Court decision has spawned conflicting answers from courts and commentators about when courts should issue injunctions forbidding continued infringement. On Capitol Hill, Orwellian-named entities representing a variety of industry heavyweights have poured millions into lobbying for or against patent reform bills, with a major focus of dispute being legislative language regarding damage awards.*

*Amidst all the commotion, one fact remains clear. We have little specific sense of what the value of patent remedies either generally is or should be. Such ignorance might inspire despair. I argue that it in fact suggests that policy making should take guidance from three principles of adaptation and two principles of implementation: (1) nonabsolutism in the formulation and application of legal doctrine; (2) antidiscrimination with respect to business models; (3) learning, an interest in fostering the production of useful information; (4) administrability; and (5) devolution of significant decisional responsibility to private or government actors nearest to the facts of an individual case. Although these principles do not uniquely determine any single best system of patent remedies, they provide a framework for assessing the relative merits of policy proposals and for suggesting ways in which proposals can be improved. In particular, the principles have implications for current debates regarding the availability of permanent injunctions, the calculation of reasonable-royalty damages, and the possibility of remedial exemptions for prior users or independent creators.*

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## I. Introduction

The prospect of an injunction-induced blackout of handheld e-mail,<sup>1</sup> a jury verdict awarding over a billion dollars in damages<sup>2</sup>—these are two of the specters that have haunted current policy discussions regarding U.S. patent law. Once a joint domain of inertia and arcana, questions of patent remedies now generate heated public debate. The 2006 decision of the U.S. Supreme Court in *eBay Inc. v. MercExchange, L.L.C.*<sup>3</sup> has spawned conflicting answers from lower courts<sup>4</sup> and academic commentators<sup>5</sup> regarding how to

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1. See Lisa A. Dolak & Blaine T. Bettinger, *EBay and the BlackBerry®: A Media Coverage Case Study*, 2 AKRON INTELL. PROP. J. 1, 27 (2008) (observing that, in heavy media coverage of a patent case related to the BlackBerry handheld e-mail device, four-fifths of “166 items relating to the . . . litigation mentioned the possibility [of] an injunction barring continuation of BlackBerry® service”).

2. See Verdict Form at 5, *Centocor Ortho Biotech, Inc. v. Abbott Labs.*, No. 2:07-CV-139 (E.D. Tex. June 29, 2009) (finding that over \$1 billion in lost-profit damages and over \$500 million in reasonable-royalty damages “would fairly and reasonably compensate” Centocor).

3. 547 U.S. 388 (2006).

4. See John M. Golden, *The Supreme Court as “Prime Percolator”: A Prescription for Appellate Review of Questions in Patent Law*, 56 UCLA L. REV. 657, 697 & n.242 (2009) (observing disagreement among lower courts about when to apply a presumption of irreparable harm if an injunction is denied).

decide when injunctions should issue. Eye-catching nine-figure damage awards<sup>6</sup> stoke calls for changes to the law of patent damages. On Capitol Hill, Orwellian-named entities grouped along industry lines, such as the Coalition for Patent Fairness<sup>7</sup> and the Coalition for 21st Century Patent Reform,<sup>8</sup> have already poured millions<sup>9</sup> into lobbying to advance or to thwart proposed legislation in which patent damages has been a major bone of contention.<sup>10</sup>

In legislative debates, public-choice concerns loom large, as proposed reforms appear commonly to track private, rather than necessarily public, interests.<sup>11</sup> Perhaps most saliently, information-technology incumbents such as Microsoft Corporation and Intel Corporation have pushed strongly for rules to limit the reasonable-royalty damages available to nonincumbent

5. See, e.g., MICHAEL A. CARRIER, *INNOVATION FOR THE 21ST CENTURY: HARNESSING THE POWER OF INTELLECTUAL PROPERTY AND ANTITRUST LAW* 251–52 (2009) (proposing a test for when injunctions should issue); Thomas F. Cotter, *Patent Holdup, Patent Remedies, and Antitrust Responses*, 34 J. CORP. L. 1151, 1175–76, 1179–82 (2009) (discussing circumstances favoring or disfavoring injunctive relief); Einer Elhauge, *Do Patent Holdup and Royalty Stacking Lead to Systematically Excessive Royalties?*, 4 J. COMPETITION L. & ECON. 535, 537 (2008) (providing reasons “not to shift from injunctive relief to damages”); Damien Geradin et al., *The Complements Problem Within Standard Setting: Assessing the Evidence on Royalty Stacking*, 14 B.U. J. SCI. & TECH. L. 144, 174–75 (2008) (criticizing proposals to limit injunctive relief); John M. Golden, *“Patent Trolls” and Patent Remedies*, 85 TEXAS L. REV. 2111, 2148–49 (2007) (suggesting that “[c]ourts could apply a rebuttable presumption of injunctive relief” while retaining an ability to stay or to deny injunctions to avoid “undue hardship”); Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEXAS L. REV. 1991, 2036 (2007) (favoring restrictions on injunctions for patent holders that do not compete with an adjudged infringer or have not exclusively licensed the invention to a competitor); J. Gregory Sidak, *Holdup, Royalty Stacking, and the Presumption of Injunctive Relief for Patent Infringement: A Reply to Lemley and Shapiro*, 92 MINN. L. REV. 714, 747 (2008) (criticizing a proposal for more frequent stays of injunctive relief).

6. See, e.g., *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F. Supp. 2d 1016, 1042 (S.D. Cal. 2008) (sustaining a jury award of “approximately \$358 million” in reasonable-royalty damages due to infringement by Microsoft Corporation).

7. The Coalition for Patent Fairness includes information technology, semiconductor, computer, and financial-services companies such as Apple, Cisco Systems, Dell, Google, and HP. Coalition for Patent Fairness, Overview, <http://www.patentfairness.org/learn/about>.

8. The Coalition for 21st Century Patent Reform includes pharmaceutical, biotechnology, and chemical companies such as Merck, Genzyme, and DuPont; more traditional manufacturers such as 3M, General Electric, and Caterpillar; and entities such as PepsiCo, CheckFree, and the American Intellectual Property Law Association. Coalition for 21st Century Patent Reform, About Us, <http://www.patentsmatter.com/about/coalition.php>.

9. See Robert Pear, *Patent Bill Is Bonanza to Lobbyists*, N.Y. TIMES, Apr. 30, 2008, at C1 (“In 15 months, two dueling business coalitions have spent \$4.3 million lobbying on [patent reform] legislation . . .”).

10. See David W. Opperbeck, *Patent Damages Reform and the Shape of Patent Law*, 89 B.U. L. REV. 127, 129 (2009) (“Surprisingly . . . , a key pressure point . . . is found deep in the arcana of how damages are calculated . . .”).

11. See, e.g., *id.* at 135–36 (discussing interests of large and small firms in advocating or opposing proposals for patent-damages reform).

patent holders while leaving untouched the lost-profit remedies available to incumbents.<sup>12</sup>

Amidst all the resulting commotion, one fact seems clear. We really have little specific sense of what the value of remedies for patent infringement generally is or should be. And it seems unlikely that we will develop a precise idea anytime soon.

Until just a few years ago, decision makers tended to skate around this chasm of ignorance, trusting that the availability of injunctive relief against infringement would foster private arrangements that bridged the gap.<sup>13</sup> In accordance with this faith, even a patent skeptic such as Justice Douglas accepted the proposition that a “patent empowers the owner to exact royalties as high as he can negotiate with the leverage of that monopoly.”<sup>14</sup>

With a patentee’s ability to invoke the leverage of an injunction now in doubt, the hunt for a satisfactory remedial system is likely to be a long one. In trying to design such a system, we can no longer duck the question of what, from a societal standpoint, a patent should be worth. In the absence of a strong presumption of injunctive relief, there is relatively little reason to trust that the market can produce an independently authoritative answer. Once the injunction backstop is removed, a patent license becomes all too clearly a contract to avoid the costs and uncertainty of litigation rather than a contract for technology transfer. Consequently, under a pure damages regime, a judicial system that looks to the market to assess patent value might find itself looking in a mirror.<sup>15</sup>

Indeed, at a very fundamental level, the market cannot provide the answer that the judicial system seeks. After all, the whole point of the patent system is to provide legal rights that alter the market and thereby induce

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12. See John Markoff, *Two Views of Innovation, Colliding in Washington*, N.Y. TIMES, § 3, Jan. 13, 2008, at 3 (observing that “Intel, Microsoft, I.B.M. and Apple . . . are looking for ways to limit the leverage of both small patent holders and patent ‘trolls,’ or speculators who buy hundreds or thousands of patents”).

13. See, e.g., *Smith Int’l, Inc. v. Hughes Tool Co.*, 718 F.2d 1573, 1577–78 (Fed. Cir. 1983) (contending that, without access to injunctive relief, a “patent owner would lack much of the ‘leverage,’ afforded by the right to exclude, to enjoy the full value of his invention in the market place”); see also Robert P. Merges, *Of Property Rules, Coase, and Intellectual Property*, 94 COLUM. L. REV. 2655, 2664 (1994) (arguing that disputes over intellectual property rights tend to fit “criteria . . . for application of a property rule”).

14. *Brulotte v. Thys Co.*, 379 U.S. 29, 33 (1965). The lone dissenter from Justice Douglas’s opinion for the Supreme Court, Justice Harlan, took an even broader view of legitimate patentee behavior. See *id.* at 34 (Harlan, J., dissenting) (contesting the Court’s conclusion that the respondent had “unlawfully misused its patent monopoly by contracting . . . for royalty payments based on use beyond the patent term”).

15. See SUZANNE SCOTCHMER, *INNOVATION AND INCENTIVES* 211 (2004) (noting “a circularity in the definition of lost royalty” given that, under a pure damages regime, expected court-awarded damages determine both “[t]he maximum that a potential licensee would pay” and “the minimum that a licensor would charge”); Adam B. Jaffe, *The U.S. Patent System in Transition: Policy Innovation and the Innovation Process*, 29 RES. POL’Y 531, 551–52 (2000) (“[I]n the absence of a right to an injunction, the outcome to [a] negotiation itself depends on the damages that the two parties believe the patentee could demand.”).

changes in resource allocations.<sup>16</sup> The goal of patent remedies cannot be simply to “mirror” the market. More plausibly, the patent system might seek to produce only desired distortions to behavior as it would otherwise occur. Of course, determining the desired scope of these distortions and designing a system of patent remedies to achieve them are difficult tasks.

How then should we determine patent remedies’ proper nature and scope? Unless we rely on a natural-rights theory of patent law,<sup>17</sup> functional concerns appear likely to predominate. Under the understanding that patent law’s grant of exclusive rights can only be justified as a means to ends, we need to look to those ends to determine what patent remedies should be.<sup>18</sup>

One could have any number of ends in mind. Rewarding favorites,<sup>19</sup> promoting technological progress,<sup>20</sup> discouraging technological progress,<sup>21</sup> maximizing social welfare,<sup>22</sup> stimulating individual creativity,<sup>23</sup> and supporting a “just and attractive culture”<sup>24</sup> all describe either past or potential aims of patent rights.

For purposes of simplicity and, in many quarters, plausibility, I generally assume a utilitarian goal that is standard in modern accounts: the patent system should act to promote the development, disclosure, and use of new technologies, ideally in a way that maximizes social welfare.<sup>25</sup> For purposes of further simplicity, I commonly assume social welfare to be well represented by a more manageable proxy—the long-term sum of the

16. See HERBERT HOVENKAMP, *THE ANTITRUST ENTERPRISE: PRINCIPLE AND EXECUTION* 228 (2005) (describing the intellectual property laws as “a very elaborate government effort to correct market failure”).

17. See William Fisher, *Theories of Intellectual Property*, in *NEW ESSAYS IN THE LEGAL AND POLITICAL THEORY OF PROPERTY* 168, 170 (Stephen R. Munzer ed., 2001) (describing natural-law arguments for intellectual property).

18. Cf. Paul J. Heald, *Optimal Remedies for Patent Infringement: A Transactional Model*, 45 *HOUS. L. REV.* 1165, 1176 (2008) (“The goal of remedies for patent infringement should be to provide incentives for efficient transactions to occur . . .”).

19. See ROBERT PATRICK MERGES & JOHN FITZGERALD DUFFY, *PATENT LAW AND POLICY: CASES AND MATERIALS* 5 (4th ed. 2007) (“With the accession of James I . . . , patents became less an incentive for new arts and more a royal favor to be dispensed to well-placed courtiers.”).

20. See U.S. CONST. art. I, § 8, cl. 8 (granting Congress the power “[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries”).

21. See Christopher A. Cotropia & James Gibson, *The Upside of Intellectual Property’s Downside*, 57 *UCLA L. REV.* (forthcoming 2010) (manuscript at 68, on file at <http://ssrn.com/abstract=1398845>) (arguing that intellectual property rights can be used to slow progress in “disfavored industries”).

22. See Fisher, *supra* note 17, at 169 (noting the utilitarian rationale for property rights).

23. See *id.* at 171 (describing intellectual property rights as a means to “create social and economic conditions conducive to creative intellectual activity”).

24. *Id.* at 172.

25. See WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW* 4 (2003) (“Today it is acknowledged that analysis and evaluation of intellectual property law are appropriately conducted within an economic framework that seeks to align that law with the dictates of economic efficiency.”).

consumer and producer welfare associated with goods or services that incorporate a particular patented invention. This is another standard assumption,<sup>26</sup> albeit one undoubtedly flawed under wide ranges of plausible circumstance.<sup>27</sup>

These simplifications seem reasonable in light of the purposes and conclusions of this Article. Focus on a relatively narrowly defined goal of economic efficiency facilitates a certain degree of analytic precision and enables substantial reference to an existing body of economic literature. The insights that result can sharpen our intuition about how to advance any of a number of potential goals.<sup>28</sup>

Moreover, even when we limit our field of vision as described, the task of designing patent remedies is hard enough. And this difficulty is a central, if not the central, theme of this Article. Allowing for the possibility of different and often more diffusely defined goals is likely only to increase the difficulty of optimal remedies design. Thus, relaxation of simplifying assumptions about patent law's purpose is likely only to reinforce this Article's basic conclusions.

Why is the task of designing optimal remedies so hard?

One major cause of difficulty, not unique to patent law, is that there is a host of classes of behavior that we would like the threat or promise of remedies to influence. On the part of patent holders, these behaviors include (1) creation of inventions;<sup>29</sup> (2) disclosure of inventions;<sup>30</sup> (3) provision of

26. See, e.g., WILLIAM D. NORDHAUS, *INVENTION, GROWTH, AND WELFARE: A THEORETICAL TREATMENT OF TECHNOLOGICAL CHANGE* 76 (1969) (developing an approach to calculating optimal patent life based on maximizing “net surplus (consumers’ plus producers’ surplus less resource cost)”).

27. See Brett M. Frischmann & Mark A. Lemley, *Spillovers*, 107 COLUM. L. REV. 257, 258 (2007) (“Spillovers—uncompensated benefits that one person’s activity provides to another—are everywhere.”); Richard S. Markovits, *On the Economic Efficiency of Using Law to Increase Research and Development: A Critique of Various Tax, Antitrust, Intellectual Property, and Tort Law Rules and Policy Proposals*, 39 HARV. J. ON LEGIS. 63, 72–73 (2002) (observing that private values and costs often differ from overall social values and costs).

28. This seems especially true given that many proposed goals, such as promoting technological progress or stimulating creativity, appear to be distinct, but not orthogonal, to a goal of maximizing the long-term sum of consumer and producer welfare. In certain respects, the interests of various candidate goals are likely to be aligned, and aspects of analyses of how to promote those goals are likely to be at least qualitatively similar. Thus, learning how to promote a goal of economic efficiency is likely to provide insight on how to promote other interests.

29. See, e.g., F. SCOTT KIEFF ET AL., *PRINCIPLES OF PATENT LAW: CASES AND MATERIALS* 66 (4th ed. 2008) (“The incentive to invent theory suggests that a patent is granted to encourage invention.”); FED. TRADE COMM’N, *TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY* ch. 1, at 6 (2003), available at <http://www.ftc.gov/os/2003/10/innovationrpt.pdf> [hereinafter *FTC REPORT*] (“To preserve incentives to invent, patent policy protects inventors [against] . . . misappropriation.”). As used in this Article and at least roughly speaking, “invention” refers to the development of a new means for, or way of, doing things, and “innovation” refers to the process of turning an invention into something of relatively significant and immediate social use, such as a commercial product or a means for producing the same. See Timothy F. Malloy, *Regulating by Incentives: Myths, Models, and Micromarkets*, 80 TEXAS L. REV. 531, 540 n.22 (2002) (“Most commentators define innovation to be the initial

notice of the scope of claimed patent rights;<sup>31</sup> and (4) action to promote inventions' further development, dissemination, or commercialization.<sup>32</sup> Relevant behaviors of potential patent infringers are similarly numerous. They include (1) use, dissemination, improvement, and commercialization of new technologies;<sup>33</sup> (2) assessment of the scope and validity of others' patent rights;<sup>34</sup> (3) licensing or purchasing of patent rights;<sup>35</sup> (4) challenges to patent claims of questionable validity or breadth;<sup>36</sup> and (5) design of new, noninfringing technologies that compete with patented technologies.<sup>37</sup>

The result of the existence of such an array of relevant behaviors is a complex situation for which it is difficult, if not impossible, to draft administrable rules that optimally incentivize or disincentivize all classes of behavior.<sup>38</sup> Moreover, the prospects for truly optimal policy making are even

commercial application of a technology or process, distinguishing innovation from invention (the development of a new idea) . . . .”).

30. See, e.g., KIEFF ET AL., *supra* note 29, at 67 (“Incentive to disclose suggests that a patent is granted to encourage an ‘enabling disclosure’ . . . .”); FTC REPORT, *supra* note 29, ch. 1, at 6 (“By requiring disclosure of the patented invention . . . , the patent system can encourage further innovations if inventors forego keeping their inventions as trade secrets . . . .”); Golden, *supra* note 5, at 2117 (describing “patent law’s rights-for-disclosure bargain”).

31. See, e.g., FTC REPORT, *supra* note 29, ch. 1, at 28 (discussing “the ‘notice function’ of patents”); John M. Golden, *Construing Patent Claims According to Their “Interpretive Community”: A Call for an Attorney-Plus-Artisan Perspective*, 21 HARV. J.L. & TECH. 321, 322 (2008) (“Claims . . . are meant to provide notice of what a patent covers . . . .”).

32. See, e.g., KIEFF ET AL., *supra* note 29, at 68 (describing the “so-called incentive to commercialize, incentive to invest, incentive to innovate, or prospect theory” of patent protection); FTC REPORT, *supra* note 29, ch. 1, at 6 (“The patent system also can encourage further innovation by facilitating investment in the research, development, and marketing necessary to commercialize a product.”).

33. See, e.g., CRAIG ALLEN NARD, *THE LAW OF PATENTS* 28 (2008) (observing that patent rights can affect the behavior of potential users of an invention “because some consumers . . . will not buy [a patented good] at a supracompetitive price”); FTC REPORT, *supra* note 29, ch. 2, at 8 (noting that patents can impose social costs in the form of “higher prices or retarded follow-on innovation”); Robert P. Merges & Richard R. Nelson, *On the Complex Economics of Patent Scope*, 90 COLUM. L. REV. 839, 843 (1990) (“[T]he notion of a patent’s social costs should include its potential to reduce competition in the market for improvements to the patented technology.”).

34. See JAMES BESSEN & MICHAEL J. MEURER, *PATENT FAILURE: HOW JUDGES, BUREAUCRATS, AND LAWYERS PUT INNOVATORS AT RISK* 48 (2008) (describing “patent clearance” activity, in which a party seeks to determine whether a planned or existing course of action falls within the scope of another’s valid patent rights).

35. See KIEFF ET AL., *supra* note 29, at 69 (observing that, in accordance with a prospect theory of patent rights, “parties will bargain toward an efficient result in which the firm that is best able to bring the patented subject matter to market will do so”).

36. See, e.g., FTC REPORT, *supra* note 29, executive summary, at 18 (expressing concern about a “collective action problem [that] may frustrate business challenges to questionable patents”).

37. See, e.g., KIEFF ET AL., *supra* note 29, at 70 (“Incentive to design around proudly offers the patent as forbidden turf, taunting competitors to circumvent its scope by inventing substitutes.”); FTC REPORT, *supra* note 29, ch. 1, at 27 (“[P]atent disclosures may stimulate competition to design around a patent.”).

38. Cf. Lucian Arye Bebchuk, *Property Rights and Liability Rules: The Ex Ante View of the Cathedral*, 100 MICH. L. REV. 601, 632 (2001) (finding that none of an array of potential rules provides optimal incentives for two parties because none “enable[s] both parties to capture the full social benefits produced by their respective investments in harm reduction”).

bleaker than this complexity suggests. This is because, under any given set of legal rules, the actual cost–benefit balance for a particular behavioral choice is often unclear or, at least, highly context dependent. For starters, even when perfect compliance with patent law is assumed, what a patentee extracts from a market can depend significantly on exogenous circumstances that have little to do with the patented invention itself. Further, typical costs and benefits of inventions and their commercialization can depend enormously not only on preexisting market structure but also on the particular technology or even patent at issue. And as an additional wrinkle for policy makers, knowledge regarding the many transactions that determine how technology markets operate is embarrassingly thin, in large part because the content and the frequency of most patent licensing are confidential.

Such circumstances of complexity, contingency, and substantial ignorance might seem destined to foil any efforts to develop general principles for patent remedies. But as William Baxter suggested decades ago, this “intractability” is itself instructive.<sup>39</sup> Problems of complexity, contingency, and limited understanding suggest principles that should guide legal design.

These principles can be grouped in two categories. The first category, principles of adaptation, features principles that serve to enable the adaptive development or application of legal doctrine. The second category, principles of implementation, features principles that seek to put decisions in the hands of the “best deciders” and to ensure that reasonably sensible decisions can be made at reasonable social cost.

The three adaptive principles:

- nonabsolutism, an allowance for flexibility or exception in the formulation and application of legal doctrine;
- antidiscrimination, a commitment to limiting the extent to which patent remedies favor one set of business models over others; and
- learning, a commitment to designing patent remedies that promote the production and disclosure of information that improves system performance.

The two implementation principles:

- administrability, a principle acknowledging that detailed tailoring of patent remedies must have limits and is only justified insofar as it promises benefits that justify its costs; and
- devolution, an interest in placing considerable discretion in the hands of private parties and government actors nearest to the facts of individual cases.

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39. William F. Baxter, *Legal Restrictions on Exploitation of the Patent Monopoly: An Economic Analysis*, 76 YALE L.J. 267, 271 (1966).

These principles are not contended to be exclusive. Nor are they asserted to be wholly determinative of unique policy outcomes. Instead, their primary role is to provide a deliberative framework for reasoned decision making that is attentive to the public interest. This is no small contribution in fora where the very terms of policy debate are at risk of capture by a limited subset of private interests. At the very least, attention to the five principles can help promote constructive discussion along lines that transcend the worldview of a particular party or industry. More substantively, the principles can suggest presumptions and burdens of production and persuasion that can guide both policy making and policy implementation. Although private interests will predictably seek to present arguments and apparent evidence that turn these principles to their favor, fidelity to the principles should make the path to successful rent-seeking and capture narrower and more challenging. A demand that public debate be channeled through facially public-regarding principles should help remind policy makers and the public that the relevant game should not be one of simply mollifying a maximal number of well-connected special interests. Further, the relative simplicity of the principles and their reference to comparatively straightforward concerns of structural design should make it harder for private interests to evade the principles' force, whether through artfully crafted legislative proposals or through cascades of allegations that are less probative of the public good than they might facially appear.

The argument proceeds as follows. Part II describes the nature of patent rights, their potential justifications, and the scope of patent remedies, and thus might be sensibly skipped or skimmed by patent law cognoscenti. Part III discusses fundamental difficulties that plague assessment of the benefits, costs, and value of patent rights. Part IV articulates the principles of adaptation and implementation, and argues that they help respond to the complexity and contingency that Part III describes. Part IV then applies the principles to contemporary debates regarding injunctive relief, calculation of reasonable-royalty damages, and potential exemptions from patent remedies for prior users or independent creators<sup>40</sup> of an invention.

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40. To try to avoid terminological confusion, I use "independent creator," rather than "independent inventor." The latter term commonly describes an inventor who acts outside the employ of a substantial-sized business entity.

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2. *Damages Apportionment.*—A second area in which subpart IV(A)'s five principles can be deployed is in evaluating proposals to reform the ways in which infringement damages are calculated. I concentrate here on a proposal that has been a focus of legislative debate. To help limit awards of reasonable-royalty damages to no more than that fraction of the infringer's

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revenue “properly attributable” to use of the patented invention, a 2009 House bill would require that a district court generally “ensure that a reasonable royalty is applied only to the portion of the economic value of the infringing product or process properly attributable to the claimed invention’s specific contribution over the prior art.”<sup>427</sup>

For multicomponent products or processes that derive value from numerous different features, this prescription for “apportionment” resonates with a substantial amount of common sense. Patent law is meant to provide a reward for invention and innovation, not for an invention’s luck in being associated with other sources of value. Consistent with such common sense, a principle of apportionment is already indicated by at least one of a canonical list of factors for courts to consider in assessing reasonable-royalty damages.<sup>428</sup>

If courts already recognize a principle of apportionment, why is there such a push for legislative reform? In the face of a smattering of damage awards of nine figures or more, the concern is that general acknowledgment of an apportionment principle might in practice be no more than perfunctory and is therefore an insufficient check on disproportionate awards.<sup>429</sup> The proposed reform appears intended to force judges and juries to make specific determinations of how much of the value of an infringing product or process is attributable to the patented invention, and to do so by specifically comparing that infringing product or process to noninfringing prior art.<sup>430</sup>

As a matter of substance, there might be much to recommend such reform.<sup>431</sup> Further, although advocacy of apportionment proposals might, as a matter of fact, be linked with advocacy of explicitly discriminatory proposals relating to injunctions,<sup>432</sup> the apportionment proposals themselves appear at least facially to apply equally, regardless of the identity of the patent holder or the adjudged infringer. Thus, the apportionment proposals might

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427. Patent Reform Act of 2009, H.R. 1260, 111th Cong. § 5 (2009).

428. See *Minks v. Polaris Indus., Inc.*, 546 F.3d 1364, 1372 (Fed. Cir. 2008) (“A determination of the royalty stemming from a hypothetical negotiation is often made by assessing factors such as those set forth in *Georgia-Pacific Corp. v. U.S. Plywood Corp.*” (citing 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970), *modified*, 446 F.2d 295 (2d Cir. 1971))); *Ga.-Pac.*, 318 F. Supp. at 1120 (listing as a factor “[t]he portion of the realizable profit that should be credited to the invention as distinguished from” other potential sources of value).

429. See WENDY SCHACHT & JOHN R. THOMAS, CONG. RESEARCH SERV., PATENT REFORM IN THE 111TH CONGRESS: INNOVATION ISSUES 21 (2009), available at [http://assets.opencrs.com/rpts/R40481\\_20090409.pdf](http://assets.opencrs.com/rpts/R40481_20090409.pdf) (“Some believe that current damages standards have resulted in the systemic overcompensation of patent owners. . . . Others believe that current case law appropriately accounts for apportionment concerns.”).

430. See H.R. 1260 § 5(a) (“[T]he court shall conduct an analysis to ensure that a reasonable royalty is applied only to the portion of the economic value of the infringing product or process properly attributable to the claimed invention’s specific contribution over the prior art.”).

431. *But see* *Opderbeck*, *supra* note 10, at 166 (“[L]imiting damage awards to the economic value of the claimed invention over the prior art upsets the balance reflected in the subject matter, novelty, [non]obviousness, and utility requirements for obtaining a patent.”).

432. See *supra* text accompanying notes 289–91.

be properly understood as failing to generate first-order conflicts with the antidiscrimination principle.

But apportionment proposals appear to raise significant concerns in relation to principles of nonabsolutism and devolution. Although the current House bill would give district courts discretion to “consider, or direct the jury to consider, any other relevant factors,”<sup>433</sup> the essential thrust of the proposed legislation is the restriction of district court discretion through imposition of a more standardized and predefined approach to calculating reasonable-royalty damages.<sup>434</sup>

Further, administrability concerns spring from the immense difficulty of the calculation demanded. As Part III indicates, it is generally hard, if not impossible, to come to a well-defined value for a patented invention, and such values are likely to vary with economic and technological circumstance.<sup>435</sup> Like the district court in *Paice*,<sup>436</sup> private parties make frequent use of rules of thumb or other crude heuristics to assign value to patent rights.<sup>437</sup> As the Chief Judge of the Court of Appeals for the Federal Circuit has suggested, it might be too much to expect courts to make a finer measure of value by comparing a potentially quite complex infringing product or process to a potentially only hypothetical agglomeration of prior art.<sup>438</sup> To the extent we are interested in having a remedies regime that provides the sort of certainty commonly viewed as crucial for private planning and ordering, it might be, *a fortiori*, too much to demand that private parties make reliable predictions of what amounts of apportioned damages a court would award. Along these lines, it is worth recalling that previous problems with apportioning profits to be disgorged from an adjudged infringer

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433. H.R. 1260 § 5(a).

434. See Carl E. Gulbrandsen et al., *Patent Reform Should Not Leave Innovation Behind*, 8 J. MARSHALL REV. INTELL. PROP. L. 328, 342 (2009) (“University organizations generally agreed that [past patent reform] bills introduced an inflexible methodology for the calculation of damages.”).

435. See *supra* subpart III(B).

436. See *supra* text accompanying note 399.

437. Cotter, *supra* note 5, at 1186 (suggesting that, in setting licensing fees, parties “might rely more heavily on heuristics and comparisons with other royalties than on a direct estimate of the value of the patent in comparison with alternatives”); F. Russell Denton & Paul J. Heald, *Random Walks, Non-cooperative Games, and the Complex Mathematics of Patent Pricing*, 55 RUTGERS L. REV. 1175, 1190 (2003) (“Readers assuming an efficient market for patents may be surprised to learn of the prevalence of rule-of-thumb benchmarks used in the absence of accurate information about the licensing value of the patent itself.”).

438. See Letter from Paul R. Michel, Chief Judge, U.S. Court of Appeals for the Fed. Circuit, to Patrick Leahy and Orrin G. Hatch, Senators, U.S. Senate (May 3, 2007), available at [http://www.patentlyo.com/patent/2007/05/patent\\_reform\\_2\\_1.html](http://www.patentlyo.com/patent/2007/05/patent_reform_2_1.html) (asserting that “adjudicat[ing] the economic value of the entire prior art, the asserted patent claims, and also all other features of the accused product or process . . . is a massive undertaking for which courts are ill-equipped”); cf. Denton & Heald, *supra* note 437, at 1208 (rejecting an approach to valuing patents by determining “the degree of advantage over the next best available technology” because of the difficulty and likely arbitrariness of such determinations).

apparently led to Congress's excision of such a remedy for a standard course of infringement.<sup>439</sup>

On the other hand, with respect to the principle of learning, proposals for stricter attention to concerns of apportionment appear desirable. Parties might thereby be inspired to acquire and to present more useful information about the specific value that a patented invention adds to an infringing product or process.

But the assignment of burdens could be crucial to the value of the information produced. The adjudged infringer seems likely to be the best potential source of knowledge about how the value of a patented invention compares to the overall value of the infringer's product or process. Hence, the learning principle would seem likely to favor placing a substantial burden on infringers to provide information that justifies a desired level of apportionment.<sup>440</sup> The learning principle thus suggests that, to the extent courts demand information on apportionment, they should not place too stringent a burden on the patentee as opposed to the adjudged infringer.

In any event, with respect to principles of adaptation and implementation, an alternative proposal from the Senate Committee on the Judiciary<sup>441</sup> might be an improvement on all fronts. In essence, this proposal abandons the effort to provide substantive instruction on how damages should be calculated. Instead, it essentially charges the trial judge with acting as a vigorous gatekeeper. The proposal mandates that "the court shall identify on the record those methodologies and factors as to which there is a legally sufficient evidentiary basis, and the court or jury shall consider only those methodologies and factors in making the determination of damages."<sup>442</sup> Although this mandate appears absolute with respect to the specified procedural requirement, it is nonabsolute with respect to the substance of how damages are to be calculated. It is the latter aspect that implicates the issues of complexity and contingency of interest here. Also of significance, the Senate Committee's proposal does not discriminate with respect to business models, leaves trial judges with primary responsibility for approaches to

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439. Landers, *supra* note 50, at 323. See generally *supra* notes 43–46 and accompanying text (noting the possibility of a disgorgement remedy for violation of an injunction against continued infringement).

440. Such is already commonly the case for disgorgement under trademark and copyright law. See BLAIR & COTTER, *supra* note 94, at 48 (observing that, under U.S. copyright and trademark law, "the plaintiff has the burden of proving the total profit earned by the infringer; at that point, the burden shifts to the defendant to prove how much of its total profit would have been earned absent the infringement"); see also 15 U.S.C. § 1117(a) (2006) ("In assessing profits [subject to disgorgement in a trademark suit] the plaintiff shall be required to prove defendant's sales only; defendant must prove all elements of cost or deduction claimed."); 17 U.S.C. § 504(b) (2006) ("In establishing the infringer's profits, the copyright owner is required to present proof only of the infringer's gross revenue, and the infringer is required to prove his or her deductible expenses and the elements of profit attributable to factors other than the copyrighted work.").

441. Patent Reform Act of 2009, S. 515, 111th Cong. (2009).

442. *Id.* § 4.

assessing damages, appears relatively straightforward to administer, and gives the courts the opportunity to assign burdens in accordance with interests in learning.

Of course, the Senate Committee's proposal might nonetheless be inferior as a matter of substantive policy. If, for example, the goal of reform is to ensure a relatively immediate and general reduction of reasonable-royalty damages, the House bill might be superior. But at least with respect to the principles of adaptation and implementation, the Senate Committee's approach has definite advantages.

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