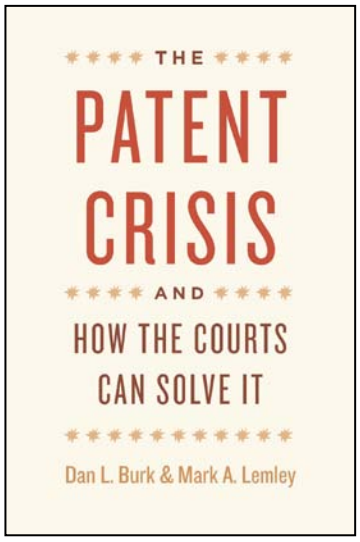

The Patent Crisis and How the Courts Can Solve It

Dan L. Burk & Mark A. Lemley

Patent law is crucial to encourage technological innovation. But as the patent system currently stands, diverse industries from pharmaceuticals to software to semiconductors are all governed by the same rules even though they innovate very differently. The result is a crisis in the patent system, where patents calibrated to the needs of prescription drugs wreak havoc on information technologies and vice versa. According to Dan L. Burk and Mark A. Lemley in *The Patent Crisis and How the Courts Can Solve It*, courts should use the tools the patent system already gives them to treat patents in different industries differently. Industry tailoring is the only way to provide an appropriate level of incentive for each industry.

Burk and Lemley illustrate the barriers to innovation created by the catch-all standards in the current system. Legal tools already present in the patent statute, they contend, offer a solution—courts can tailor patent law, through interpretations and applications, to suit the needs of various types of businesses. *The Patent Crisis and How the Courts Can Solve It* will be essential reading for those seeking to understand the nexus of economics, business, and law in the twenty-first century.

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<PT>Part I: The Problem</PT>

<CN>Chapter 1</CN>

<CT>The Gathering Storm</CT>

The patent system is in crisis. The consensus in favor of strong patent protection that has existed since the creation of the Federal Circuit (the appeals court that hears all patent disputes) in 1982 has broken down. Patent owners--and the Federal Circuit itself--are beset on all sides by those complaining about the proliferation of bad patents and the abuse of those patents in court. Congress, the Federal Trade Commission, the National Academy of Sciences, industry leaders, the press, academics, and even the Patent and Trademark Office (PTO) itself have all gotten into the act. They point to example after example: silly patents granted by the PTO; lawsuits filed by people who invented something decades ago against companies who do something very different today; patent claims so confusing that no one can be sure what the patent covers, even after a district court holds hearings on the subject; and the ability of those who own a patent on a small component to get control over most or all of a much larger product.

Whether you think this crisis is real, or is instead a crisis of perception, probably depends on where you sit. There is a reason we are hearing this firestorm of criticism; the problems and examples are real. But the patent system described above--the one in crisis--is not the only one. There is another patent system in the United States today, one in which claims are clear, patents are subject to significant scrutiny, and strong protection is necessary to allow companies to recover hundreds of millions of dollars in investment. The prototypical industry that operates in this second patent system is the pharmaceutical industry, but other industries, including medical devices and chemistry, look more like this as well.

Talk to lawyers or businesspeople at technology companies about the patent system, and you will quickly get a sense of our two different patent systems. In the pharmaceutical industry, there seems to be a strong consensus (at least among innovative rather than generic pharmaceutical companies) that patents are critical to innovation. Their only complaint is that patents aren't strong enough. They don't last long enough to compensate for FDA delays, and the uncertain or probabilistic nature of patent scope and

validity leaves them with uncertain protection for their enormous investment. Those in the biotechnology industry also see patent protection as critical to their survival, though they may also worry a bit about how the many different upstream patents owned by others might affect their ability to produce products at the end of the day.

Lawyers and executives in the information technology industries, by contrast, almost invariably see the patent system as a cost rather than a benefit to innovation. Even companies with tens of thousands of patents generally use those patents only "defensively," to minimize the amount they must pay other patent owners to permit them to sell their products. Ask most of these companies, and in their candid moments they will tell you that they would be better off without any patent system, or at least with one that was radically changed and that left them alone to innovate.

Any doubts that the patent system is perceived by different industries in fundamentally different ways were dispelled during the course of congressional debates over patent reform in the four years beginning in 2005. The reform process ground to a halt because different industries couldn't agree on a single principle of reform. The reforms the pharmaceutical and biotech industries wanted--harmonization on first to file, the elimination of the best mode requirement, and the weakening of rules against inequitable conduct--were opposed by the IT industries. At the same time, the things the IT industry wanted--reforms to limit damages and injunctive relief in patent holdup settings, and an effective administrative process to oppose patents--were anathema to the biomedical industries.

Something very important is going on here. When some of the most innovative companies in the world think that they would be better off without a law whose entire purpose is to promote innovation, policymakers should sit up and take notice. At the same time, the fact that other innovators clearly rely on patent protection to fund research and development means that we can't simply get rid of the system. Clearly, patents are doing good in some circumstances, but they are also doing harm in others. Why is it that different industries focus on different effects? What should we do about it? Our effort to think through these problems is at the heart of this book.

We think that the problem is deeper than a question of which companies are on which side of particular cases at any given time. The economic evidence is overwhelming that innovation works differently in different industries, and that the way patents affect that innovation also differs enormously by industry. The question for patent policy is how to respond to those differences. In this book we suggest that the courts, not Congress, are best situated to deal with these differences, and indeed that they already have the tools to do so, provided they have the self-confidence to use them.

We hope, in short, to convince the reader of three things: (1) that a purely unitary patent system no longer fits the extraordinarily diverse needs of innovators in today's technology industries; (2) that the solution is not to split the patent system into industry-specific protection statutes, but to tailor the unitary patent rules on a case-by-case basis to the needs of different industries; and (3) that it is the courts, not Congress or the PTO, that are best positioned to do this tailoring.

Saying that the courts should have the power to tailor patent law to the needs of different industries will raise the hackles of many. To some, it smacks of judicial activism and raises questions about the institutional competence of the courts. To others, even those happy with the courts in charge, industry-specific rules will seem unworkable or a recipe for business uncertainty. We will consider these objections in detail later in the book, in chapter **8**. But first, it is important to establish the need for such a system. We therefore begin in chapter 3 by examining the overwhelming evidence that innovation generally, and the relationship of patents to innovation in particular, differ by industry. A truly "unitary" patent law would therefore treat unlike things alike, which is neither fair nor likely to best encourage innovation across the range of industries. We then discuss the wide variance in theories of the patent system, pointing out how neatly they map to the different needs and understandings of different industries. Significantly, we explore the myriad ways in which the courts *already* treat innovation in different industries differently. The question, therefore, is not whether we should retain a unitary patent system--we don't have one now. The only question is whether we should acknowledge and embrace these differences, try to weed them out by fundamentally changing the law, or let the industry-specific characteristics of patent law develop accidentally. Given these alternatives, we think the right choice is clear.

We turn next to the most common objection to this flexible, industry-focused patent system: the idea that courts can't, or shouldn't, make these determinations. It is true that courts face some significant limits in their ability to tailor patent law to the needs of particular industries. But all advantages are comparative, and we suggest that neither the option of rigid uniformity nor the alternative of letting Congress or the PTO divide up the patent system is particularly attractive. A patent system that lacks the flexibility to deal with the radical differences between industries will break rather than bend. And a patent system whose only flexibility depends on particular industries lobbying Congress for specialized rules is unlikely to produce desirable rules. Certainly the lessons of recent efforts at patent reform are not encouraging for those who would rely on Congress.

The balance of the book begins the process of fleshing out our vision of a modular patent system. We begin in chapter 9 with some of the many industry-specific "policy levers" that courts now use to tailor the nominally unitary patent system to the needs of different industries. We talk about the ways courts in the last few years have begun to create new policy levers that treat different industries differently, and how those recent changes will alleviate some of the pressure that threatens to fracture the patent system. We then discuss in chapter 10 some other levers courts have the power to use but currently do not, and some things Congress could do in the course of patent reform to facilitate the use of policy levers by the courts.

Some of the consequences of policy levers are fairly clear, especially for the two industries that today exist at opposite poles of the patent system--pharmaceuticals and information technology. But policy levers will also apply to other industries with more complex characteristics. As a result, in chapter 11 we offer preliminary assessments of the economics of one such industry--biotechnology--and discuss how policy levers can and do apply in biotechnology. Chapter 12 does the same for the IT industries.

Our goal in these chapters--and in the book as a whole--is not to offer the last word in how the patent system works in different industries. Rather, it is to begin a conversation about how the patent system can best adapt to the diversity of the modern world. If we

don’t have that conversation in policy circles--and have it soon--the future of the patent system will be bleak indeed.