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## HOW TO FIX PATENTS: ECONOMIC LIBERTY REQUIRES PATENT REFORM

Patent policy is increasingly failing in its constitutionally enumerated purpose of “promoting the progress of the sciences and useful arts” as a result of patent trolling and an epidemic of granting low-quality patents. For conservatives and libertarians, this should be striking, as the Copyright/Patent Clause is the only clause in the Constitution that provides a specific purpose for granting the government that power.

If this clause means anything, it certainly doesn’t mean to “reduce the progress of the sciences and useful arts,” which is the unfortunate result of how today’s patent policies are affecting several important sectors of the economy. Patent trolling, created and exacerbated by modern patent policy including low-quality patents, is increasingly stifling competition, stopping legitimate innovations created independently, and raising barriers to entry for new market entrants.

Restoring constitutional principles for patents by implementing free market oriented policies

will jumpstart the U.S. economy and is well past due. The solution to patent trolling is not merely addressing trolling behavior, but also fixing the underlying problem of low-quality patents.

In this report, we present a number of suggestions for practical reform to patent policy consistent with the original public meaning of the Patent Clause, which will foster more innovation, entrepreneurship, and economic growth. Patents are one of the primary ways the federal government *regulates* innovation and technology throughout the economy, and today it more closely resembles cronyism rather than sensible policy.

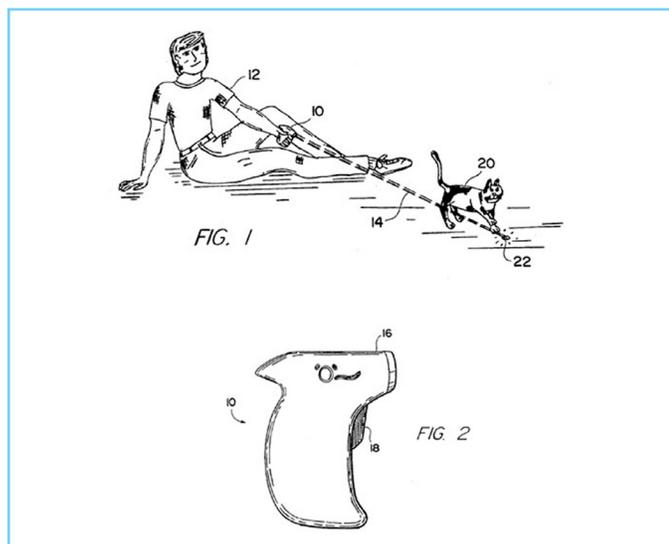
When government and big business team up, they often rig the game to keep out the competition, and the case is no different with modern patent regulation. Recently, several conservative organizations—many of whom receive funding from industries with vested interests—have tried to preempt any form of patent reform by arguing how patent reform would violate their “property rights.”

## 5 Steps to Perfect Trashing



Nothing could be further from the truth: janitors do not have “property” in how to clean a building; Apple does not have “property” in rounded rectangles and “slide to unlock”; Amazon does not have “property” in one-click checkout; Priceline does not have “property” in the concept of reverse auctions; Microsoft does not have “property” in squiggly lines when you mistype a word; Smuckers doesn’t have “property” in peanut butter and jelly

## Patent on ‘Method of Exercising a Cat’ with a Laser Pointer (US5443036 A)



Patent granted in 1995 under pre-KSR (2007) standard and expired 2007 due to non-payment of maintenance fees

sandwiches, anymore than a known patent troll has a “property” in the entire practice of podcasting; certainly no one ought to have “property” in the concept of the hyperlink; and we should probably all agree that no one ought to have “property” in the idea of exercising a cat by using a laser pointer or the idea or using a comb-over to hide partial baldness.

Unfortunately, they have—or in some cases had, and **in these cases should never have had**—*monopolies* through patents granted by a government regulator, the United States Patent Office. The claim that one has a *right* to a patent for all hyperlinks is as ridiculous as Hollywood claiming they have a *right* to their \$15-20 million tax credit for every film and TV production, which Congress gave them retroactively for 2014. There is nothing conservative about using government regulation to secure your market position and stifle competition.

This is one reason why several conservative groups now support patent reform. Conservative and libertarian groups that have advocated for patent reform in one form or another include Americans for Tax Reform, the Heartland Institute, the Cato Institute, the Heritage Foundation, the Competitive Enterprise Institute, the Mercatus Center, Americans for Prosperity, Frontiers of Freedom, the Independent Institute, the Manhattan Institute, the Mises Institute, Institute for Liberty, Hispanic Leadership Fund, the Institute for Policy Innovation, the Latino Coalition, Independent Women’s Forum, Lincoln Labs, the American Enterprise Institute, the Center for Individual Freedom, American Commitment, Taxpayers Protection Alliance, the Discovery Institute, Generation Opportunity, Citizen Outreach and others.

*We at Lincoln Labs know that most small tech startups, with exceptions in the hard science fields, rarely file for a patent until they become big and successful. It is a myth to believe that patents are the only, or even the main, way that innovation occurs—a myth apparently believed only in Washington, D.C. and not based on any empirical data. Nowhere is that myth more clear than in the internet/app startup economy: most of their interaction with patents consists of patent trolls extorting them for nonsense patents. In fact, few leading tech companies are successful because of the strength of their patent portfolios (e.g., Twitter, Tesla, Space-X, Uber, Lyft, Square, Facebook, Ebay, Kickstarter, Etsy, Box, Dropbox, Airbnb, and Reddit). Today, patents have become a tax on many forms of innovation rather than fulfilling their constitutional purpose.*

A patent is one of the strongest tools that government can provide in a free society: a legal monopoly to a person or business to restrict the liberty of other persons. Granting individuals or corporations the power to restrict others' liberty and thereby reduce competition in the marketplace must be done with strict scrutiny to ensure the regulation is effective and narrowly tailored. Today, it is not, as there has been almost no scrutiny by policy-makers on when patents should be granted.

## Monopolies Must Be “Guarded with Strictness Against Abuse”

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Every time some lobbyist is paid to argue that patents are their property—and thereby shut down a thoughtful debate on what type of patent system would actually foster innovation—we must

remember that James Madison warned us 200 years ago to guard patents and copyright with “strictness against abuse.” *Patents have an important purpose*, but when they lead to monopolies and are abused, they become the worst of crony capitalism. Today, that abuse is omnipresent and has become a significant barrier to long-term economic growth.

If “monopoly” sounds like a scary phrase to you, *it should*, as it was to our Founding Fathers. Historians and the U.S. Supreme Court have credited monopolies as a major cause of the American Revolution. Great Britain tried to eradicate monopolies with the *Statute of Monopolies*. The Boston Tea Party’s protest involved taxation of tea imported by the East India Company’s trade *monopoly* (specifically through a special tax refund). The monopolistic Navigation Acts were among the grievances listed in the Declaration of Independence. Aversion to monopolies was so strong that several state constitutions contained provisions condemning the creation of monopolies. As James Madison would say, “With regard to monopolies, they are justly classed among the greatest nuisances [sic] in government.”

Opposition to monopolies was so significant that some of the Founders refused to sign the Constitution in part because of their fear of it allowing monopolies. Several ratifying conventions even requested amendments to ban monopolies or “exclusive advantages of commerce.”

*There are few aspects of the Founding Era more clear than the fact that many of the Founders were greatly worried about monopolies.*

## Constitutional Patent

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James Madison, the father of the Constitution, warned of the dangers of these *monopolies* for a free people, explaining how the Constitution banned all of them—except for, Madison noted, copyrights and patents. Madison explained, “Grants of this sort can be justified in very peculiar cases only, if at all—the danger being very great that the good resulting from the operation of the monopoly will be overbalanced by the evil effect of the precedent, and it being not impossible that the monopoly itself, in its original operation, may produce more evil than good.”

Thomas Jefferson, the primary drafter of the Declaration of Independence, felt even more strongly, arguing on Lockean grounds that copyrights and patents were violations of our actual natural rights because of their limitation upon economic and personal liberty. Jefferson would later serve as the nation’s first patent examiner while he was Secretary of State. While Madison was more in favor of copyright and patents, he shared Jefferson’s concern for the potential negative impact of both for abuse by interest groups. Thus, Madison provided an ominous warning for future generations that these monopolies must be “guarded with strictness against abuse.”

*This warning appears to be one of the few that the Founders provided for future generations. Today, that economic liberty—our natural right that our Founders endeavored to secure—is being violated through ridiculous regulation enacted to protect big business interests, manifested in excessive patenting and patent trolling.*

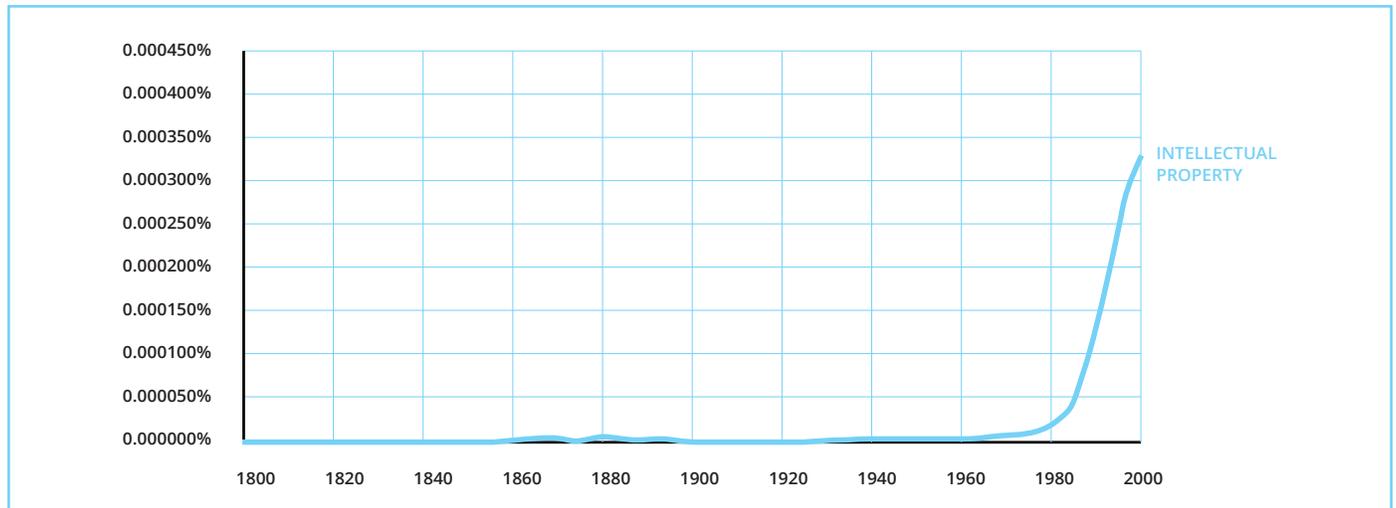
Madison was clear that the U.S. Constitution banned monopolies—unjustified restrictions on economic liberty—except for in two cases where the “benefits” narrowly outweighed the “costs.” Those were for copyrights and patents because those monopolies were worth the substantial “costs” to business and liberty. Madison himself referred to these monopolies as the “sacrifices of the many to the few.”

*Madison and Mason weren't referring to Rockefeller's Standard Oil, Carnegie's U.S. Steel, or AT&T, as the modern antitrust definition of monopoly (from the 1890 Sherman Antitrust Act) didn't exist then; rather, they were talking about the exclusion of others from entering a market through the force of government (something the Founders were intimately familiar with).*

*The Founders believed in the importance of economic liberty—the ability of individuals to enter into contracts, create a business, and sell services without unjustified government intervention. And they went out of their way to ensure the protection of this liberty in the Constitution.*

This is not an argument against patents and copyright in the slightest. Most of the Founders thought they were beneficial—so beneficial, in fact, that they were included in the Constitution despite the known risk of them being abused. However, when someone says patents and copyrights “are my *intellectual property*” within an originalist argument—intellectual property being a term that didn’t even exist in modern parlance until 1985—they need to get their head examined.

## Google NGram of the Term "Intellectual Property"



Most constitutional scholars agree that patents are a form of temporary monopoly granted for specific purposes. Furthermore, modern copyrights and patents from the Founding Era look almost nothing like copyrights and patents from today. The similarities between the two is only in nomenclature: in the eighteenth century, patents were extremely rare (268 granted in first ten years), clearly explained to others how to build your idea, and were only granted for true inventions. They were, according to Adam Smith himself, limited deviations from the free market that were worth the limited cost to society.

*But today, patents are omnipresent (324,000 granted in 2014), unclear for others to read and learn from, and too often granted for “ideas” that are so trivial they cannot be considered true inventions at all. The American people deserve better.*

It has become all too common, across both political perspectives, for people to claim they have a positive “right” to this or that, such as a right to not be offended by hate speech; a “right to be forgotten”; a right to healthcare; a right to welfare; a right to access the internet; or a right to not see

others express their religious beliefs; but no one has a right to not face competition in the market. And there is nothing originalist or conservative about astroturf organizations inventing their version of history to claim they have a right to patents on hyperlinks, rounded rectangles, etc.—that is *pure crony capitalism*.

Only in a place that can honestly argue that pizza is a vegetable can someone with a straight face pretend that patents to “slide to unlock” and the idea of “podcasting” are property.

As can be seen from the historical development of patents as a monopoly; the *British Statute of Monopolies*; the words of two of the most influential Founders, Madison and Jefferson; the primary economic book of the Founding Era, *The Wealth of Nations* by Adam Smith; and Founding Era court decisions, it’s clear that patents and copyrights were monopolies granted by the government for the constitutionally enumerated purpose of “promoting the progress of the sciences and useful arts.”

*“The problem of the prevention of monopoly and the preservation of competition is raised much more acutely in certain other fields to which the concept of property has been extended only in recent times—I am thinking here of the extension of property to such rights and privileges as patents for inventions, copyright, trademarks, and the like. It seems to me beyond doubt that in these fields a slavish application of the concept of property as it has been developed of material things has done a great deal to foster the growth of monopoly and that here drastic reforms may be required if competition is to be made to work.”*

*Friedrich August Hayek, “Individualism and Economic Order”*

Today, the very abuse that our Founders warned us of has become a cancer devastating our economy and metastasizing larger every day. This abuse and corruption slows “business dynamism,” reducing creative destruction; business churning and new firm formations have been on a persistent decline during the last few decades.

It’s unlikely that the Founders would be surprised—they warned us, after all. They would just be surprised at the citizens’ failure to address this problem.

James Madison warned us 200 years ago that copyrights and patents, as monopolies, must be “granted with caution, and guarded with strictness against abuse.” Today, this abuse restricts our individual liberty and stifles our economic vitality. Americans pay more for goods and services because of the abdication of the free market, while new firm creation continues to decline and billions of dollars are sidelined from the market as more industries are off-limits to new entrants. *Economic liberty isn’t just important—it’s essential.*

## Privileges and Immunities

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The Founders sought to protect our natural rights to economic liberty and did so in “The Privileges and Immunities Clause” and the Ninth Amendment to the Constitution. So important were these natural rights that John Locke would argue it was the primary purpose of government to protect these rights. Later, the Fourteenth Amendment would be added to include a provision: “No state shall make or enforce any law which shall abridge the privileges or immunities of citizens in the United States.” As Justice Thomas would explain in *McDonald*, privileges or immunities were “synonyms for ‘rights.’” The point of this clause was to protect our natural rights, including our right to economic liberty, which protects our ability to enter a market and compete. But today, somehow, the *primary purpose* of government has been forgotten.

The need for these clauses—the Privileges or Immunities Clause in particular—should be clear today, as industries lobby government for state-granted monopolies or regulations to keep out the competition. An open secret in Washington is that big business often likes regulations because they are the most capable at conforming to regulations and using them to keep out competitors.

Examples of crony capitalism are not new in American history; in the nineteenth century, optometrists crafted regulations to keep out competitors from fitting eyeglasses, thereby jacking up prices on consumers and creating an artificial market (which to some extent continues to today). State governments granted butcher monopolies and ice monopolies that were able to create artificial

barriers to entry for new competitors. At one point, even the sale of margarine was illegal in many areas of the country because of protectionist laws passed on behalf of the butter industry. This, of course, is certainly not an American-only problem. Switzerland, for example, passed legislation to restrict the number of types of cheeses that could be sold, and carefully restricted supply and price through a cheese cartel (and also *created* fondue as a marketing gimmick!).

Today, craft beers have had to deal with protectionist laws and regulations, monks have fought and won against regulations that would prohibit them from selling caskets, Uber has to deal with a myriad of rules created by the taxi cartel to keep out competition, and the car industry has been hampered for over 50 years by ridiculous car-dealer restrictions stifling competition from new entrants like Tesla Motors and driving up costs for consumers.

The solution to these problems is simple: go back to the Constitution and, in doing so, barriers to entry will fall away, competition will increase, and economic liberty will be secured. The same solution is needed on patents that suffer from the exact same problem today. As several appellate courts have found, “there exists a fundamental right to compete through imitation of a competitor’s product, which right can only be temporarily denied by the patent or copyright laws” (*Leatherman Tool Grp., Inc. v. Cooper Indus.*). However, too often today, patents for even non-inventions are omnipresent, not only temporarily denying our fundamental rights, but often completely violating them.

*“It must be remembered that the federal patent power stems from a specific constitutional provision. The clause is both a grant of power and a limitation. This qualified authority...is limited to the promotion of advances in the ‘useful arts.’ ...Congress in the exercise of the patent power may not overreach the restraints imposed by the stated constitutional purpose...this is the standard expressed in the Constitution, and it may not be ignored.”*

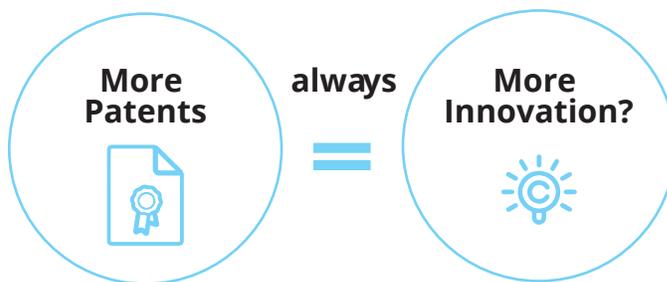
*Graham v. John Deere Co. (1966)*

## Patent Abuse

Patent abuse is simply another restriction on economic liberty that must be dealt with as such, though its costs are several orders of magnitude more severe.

Politically, it appears difficult to stop. Neither party has risen to the occasion of taking on this cronyism; both parties are drinking the kool-aid that more patents equal more innovation, allowing companies to lobby for more regulation under the guise of “property.” Major conservative organizations have been corrupted by special interests to argue, ironically, for more regulation.

Few political groups are arguing for less regulation and going back to Constitutional principles.



Instead of lobbying the government for special favors for regulation to protect their industry, companies now have a backdoor to create barriers to entry for competitors. Instead of passing a whole new law or regulation to secure their market position, they can instead apply for patents on obvious ideas. So pernicious is this trend that several companies now have robotic algorithms to take newly filed patents, change a few words, and file for new patents themselves automatically.

When these companies get a monopoly on squiggly lines, rounded rectangles, or hyperlinks, instead of looking guilty when exposed, they could scream that this is their *property!* Unfortunately, while this has been an effective political tactic in Washington, in real America, we are all paying the costs: entire industries are off-limits for competition today.

When low-quality patents are granted, perhaps better phrased as “poorly-awarded patents,” they are a sword for dominant firms to keep competitors from their industries. When this happens, as it is increasingly happening across different sectors of the economy, competitive intensity declines and the process that drives innovation—Joseph Schumpeter’s theory of *creative destruction*—ceases to function properly, drastically slowing economic growth and technological progress. Creative destruction requires new competitors to force incumbent industries to adapt or die, but when new entrants can’t compete at all because of a thicket of patents preventing their entry, then the incumbent has little incentive to innovate and entrance by new competitors becomes increasingly difficult.

*This cronyism is stealing the potential of America’s future in favor of a chosen few, is the opposite of free market, and is entirely reversible.*

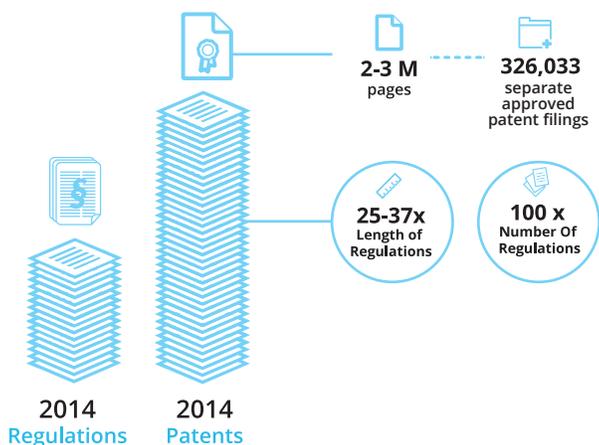
Today, one can divide the economy into sectors open for competition and sectors on supermax lockdown preventing any new participants. Areas with competition are innovative and pushing the economy forward, but areas on lockdown are calcified and holding us back. Patent abuse is increasing the number of sectors off-limits to market forces.

Numerous research studies now demonstrate that patent litigation is increasingly harming innovation. Three recent empirical studies confirm that patent litigation is also reducing capital investment in startups, thereby reducing research and development spending. Incredibly, the more research and development a firm performs, the more likely it is to be sued for patent infringement.

Recent attention has focused on the growth of federal regulations, as published in the Federal Register as 78,978 pages in 2014 with 3,541 agency-issued rules and regulations. These regulations directly limit business activity and personal liberty, and are enacted into the force of law without any up or down vote by Congress. Researchers estimated that mounting regulations have slowed economic growth by an average of 2% per year over the past fifty years. Patrick McLaughlin, an economist at the Mercatus Center, has said, “If you wanted to have a regulatory expert or economist tell you where are the regulations in that stack of pages that are problematic, they can’t give you a comprehensive answer... Because no one can actually go through it all.”

But patent grants are another form of regulation—see House Majority Leader Kevin McCarthy’s affiliated 501c4 YG Network’s Room to Grow Report referring to patents as regulation that

directly limits business activity and personal liberty without any up or down vote by Congress. If the 2014 patents that were granted by the USPTO were published in the Federal Register, it would be around 2-3 million pages with 326,033 separate patent grants—over 25-37 times the length of agency-issued regulations and almost 100 times the number of agency-issued rules and regulations (and this is just the patent filing portion). While more inventions is a great thing, many of these patents are not inventions at all and make it harder for new entries in the markets.



Patents are a form of restraint on individual freedom. A patent confers a right to exclude others from making, using, or selling in the United States the invention claimed by the patent. Every Tuesday, there are roughly 6,270 new things that no American is allowed to do (Tuesday is when patents are issued).

## The Patent Curve

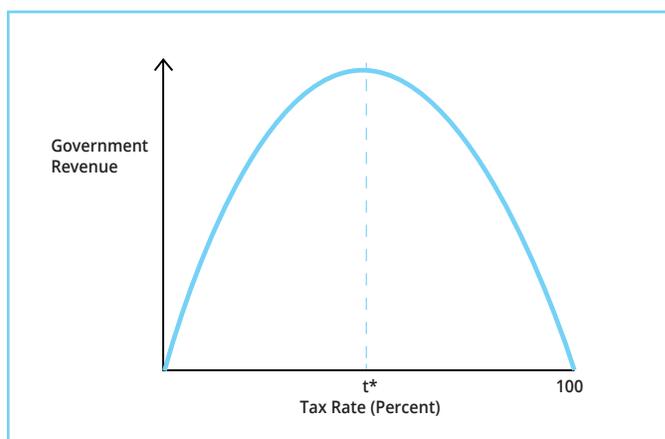
Conservatives and libertarians are familiar with the concept of the Laffer Curve, showing how increasing tax rates beyond a certain point will be counter-productive in raising further tax revenue.

*“But not all entrepreneurs are so lucky. Ideas fuel innovation, and innovation drives growth. And one big way government intersects with the world of ideas and innovation is through patent and copyright law. America’s founders thought that innovators needed to earn an economic return for their efforts and be protected temporarily from imitation. But over the years, copyright and patent law has evolved into cronyist protection of the revenue streams of powerful incumbent companies—a type of regulation that hampers innovation and entrepreneurship.”*

*Young Gun Network “Room to Grow Report” (2014), James Pethokoukis, American Enterprise Institute*

But patent policy operates by similar economic principles.

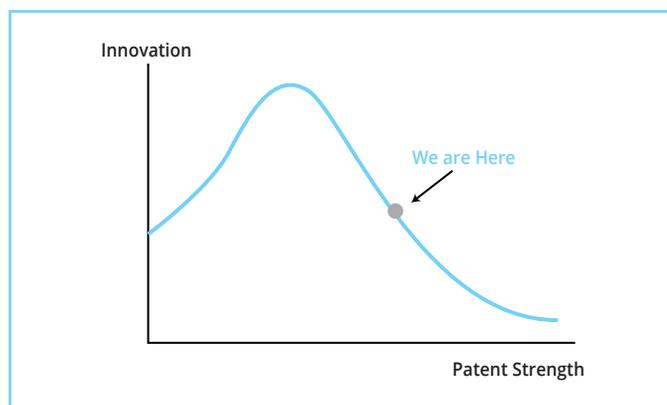
If we adopted a policy of zero patents, there would be innovation in a variety of sectors, as many technology companies make little use of patents, but there would likely be some sectors with less innovation, particularly pharmaceutical drugs but also in several other areas of technology that involve large research and development costs with limited ability to recoup the investment.



Conversely, if we adopted a policy of infinite patents, defined as where everyone can obtain a patent on anything regardless of whether it’s an

innovation (patenting the concept of a cup, a desk, carpet, the ability to sell coffee etc.) for free and without a lawyer (lowering barriers to filing for patents), where patents last perpetually and are enforced with strong penalties for infringements, there would be extremely limited innovation (every single innovation would require enormous licensing fees and working with competitors), significantly reduced economic growth as well as serious threats to individual liberty (as everyone would violate thousands of patents a day and be legally responsible). The root of the problem is that infinite patents displaces the free market by replacing the invisible hand with a government-directed hand that incentivizes trolling behavior over innovation.

Current patent policy is somewhere in the middle between zero patents and infinite patents, and the thesis of this report is that modern patent policy maximizes innovation and growth at a different point on this curve than where we are today. Currently we are closer to the “infinite patent” side than we are towards the optimal level of patent policy. Alex Tabarrok, a professor at George Mason University, has come up with a form of patent curve displayed below that demonstrates this concept.



In practice, patent policy is more dimensional than a 2D representation of weak to strong, as there are many aspects of patent policy to be examined, but this curve is useful in considering changes to patent policy.

*Higher barriers to entry across the economy → Lower competition within economy → Lower creative destruction → Lower innovation and higher costs to consumers.*

Increasingly, the return on investment for a company to lobby, sue, or file for false patents is greater than the incentive for a company to innovate—and this is an existential danger for long-term growth. Patents, when used properly and granted correctly, are an effective incentive for research and development, but they can just as easily stifle innovation when granted recklessly, thereby leading to abuse.

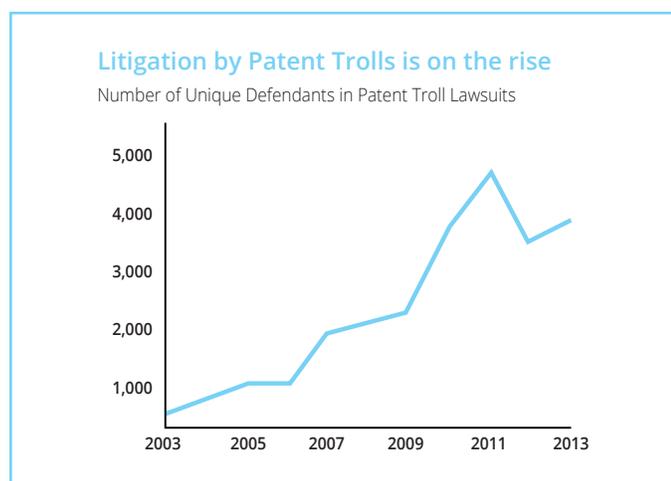
## Stories of Patent Abuse

In 1991, Bill Gates wrote an all-company memo: “I feel certain that some large company will patent some obvious thing” and use the patent to “take as much of our profits as they want.” This behavior is precisely what we have seen in many sectors of the economy. As Bill Gates explained, “A future startup with no patents of its own will be forced to pay whatever price the giants choose to impose. That price might be high. Established companies have an interest in excluding future competitors.”

Today, this is happening at the hands of non-practicing entities that have large patent portfolios and sue small businesses for alleged infringement.

Sometimes the infringement may be substantiated, but often the infringement is alleged but never proven. Often these non-practicing entities send a threatening letter asking for \$50,000-\$100,000 for a settlement. Project Paperless claims a patent on using an office scanner to scan and email a PDF document and has used this patent, through several shell companies, to shake down companies with demand letters for using scan to email a PDF document. How many companies infringe on this type of patent?

When small businesses realize that the proposed settlement is less than the cost of defending themselves in court, they are often quick to pay up even when they are not infringing. Fighting a patent troll and winning is a pyrrhic victory after wasting an average of \$1-2 million in defense costs at litigation. So-called patent trolls were estimated to cost the economy \$29 billion in 2011 alone in just direct legal costs—not even counting the diversion of resources, delays in new products, and loss of market share.



Another estimate shows that, in aggregate, patent litigation destroys over \$60 billion in firm wealth each year.

## Vlingo

Consider the story of Michael Phillips that was chronicled in *Patents Used as a Sword*. In 2006, he co-founded a voice recognition company that developed the technology that was integrated into Siri. His company, Vlingo, was contacted by a much larger voice recognition company, Nuance. As reported in the *New York Times*, Nuance’s chief executive told Mr. Phillips, “I have patents that can prevent you from practicing in this market.” They issued Phillips an ultimatum: he could sell his firm to Nuance or be sued for patent infringement. Phillips knew his technology was not infringing, as he had developed it with his own team out of a university laboratory, so Phillips refused to sell. Then Vlingo was hit with six lawsuits.

Eventually, the jury ruled that there was no infringement, but winning the first lawsuit cost Phillips \$3 million dollars and the financial damage was already done. Most entrepreneurs don’t have \$3 million to fight frivolous claims to court. Phillips had mortgaged his company and spent his savings and seed capital for the company. As is common among small companies harassed by patent trolls, Phillips explains that during the lawsuit they essentially shut down operations and research to conserve resources, as opposed to spending time and resources innovating.

*Years wasted in litigation can be lifetimes in technological cycles.*

But after winning the first lawsuit, Phillips was informed that he still had five more lawsuits to go. With no other options, he was forced to sell his company. Phillips explains, “We were on the brink

of changing the world before we got stuck in this legal muck.” Incredibly, Phillip’s story is a *success* story: he had the resources to fight through one trial, and he had clear evidence that he wasn’t infringing. Other entrepreneurs are not so *lucky*.

## Jump Rope

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Peter Braxton, founder and CEO of Jump Rope, created an app to allow users to skip lines and get priority access for free. After launching his app and raising over \$250,000 in funding, he was sued for infringing a patent on reserving future purchases of goods and services. Braxton would spend more than \$100,000 funding his litigation. While he won in court and had his legal fees repaid, the patent troll Smart Options appealed the decision and threatened to sue under a new patent.

Smart Options explained their litigation to the *New York Times* as, “It’s not clear-cut whether our patents cover what Peter Braxton is doing. What’s clear-cut is that he chose to say ‘no’ to more than half a dozen reasonable relationships we laid out for him.”

## Ditto

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Ditto, a virtual eyewear startup that allows customers to virtually “try” on glasses, was **sued** by the owners of 1-800-ContactsandGlasses.com for patent infringement. Their valuation allegedly plunged \$3-4 million as a result, and the owner had to lay off four of their fifteen employees to pay for legal expenses.

## X-Plane

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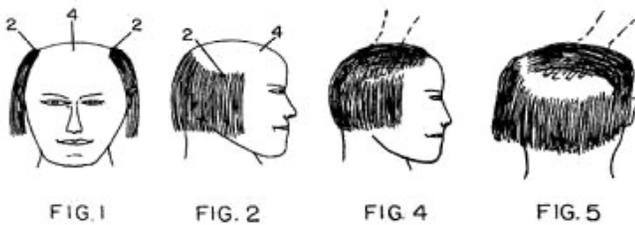
Austin Meyer wrote X-Plane, an app that lets people practice flying. His \$3 million per year grossing small business received a lawsuit from Uniloc, claiming he was infringing their patent. As he explains, “When I first heard this, I assumed it was some kind of mistake and they had sued the wrong person, as I had never looked at a patent in my life—so how could I have violated one? ...As far as I can tell, the patent they say I am infringing has a very vague description of how someone else might... look up a name on a list... So according to the patent office in 2001, someone thought of, for the very first time, looking up a name on a list on a computer.”

X-Plane allegedly violated this patent because it was sold on Android, and Google Play works by putting customers names on a list to see if they have paid for it. X-Plane’s litigation estimate was to be around \$3 million, approximately one year’s revenue for X-Plane. Uniloc asked for \$50,000 to settle. After three years and hundreds of thousands of dollars in litigation fees, they invalidated the claims of the patent suit. Then Uniloc responded by claiming that X-Plane violated two other patent claims. Three years and hundres of thousands of dollars in litigation fees later, they invalidated those claims too, but there are 113 claims in the patent—all, according to Austin Meyer, related to looking up names on a list. As stated by Austin Meyer, “If it takes us three years to overturn each claim, and there 113 claims, I’m in for 450 years of litigation—does that sounds crazy to you?”

## Low Quality Patents is the Core of the Problem

No one should have been granted a patent for the concept of users skipping lines through an online queue, the idea of trying on a virtual pair of glasses, or checking customers names on a list to see if they paid. Innovatio claims that anybody using Wi-Fi, including a home user, is infringing its patents. The company has sent demand letters to coffee shops, hotels, grocery stores and restaurants offering Wi-Fi, demanding \$2,300 to \$5,000 to settle. MPHJ Technology Investments has sent demand letters to hundreds of American businesses, claiming infringement of their patents involving scanner technology and seeking \$1,000 per worker in licensing royalties. Eolas claims it owns “essentially the whole Internet,” sued Microsoft, obtained a \$565 million judgment, and settled for an undisclosed amount even though its patents were ultimately invalidated.

In one of the most violated patents of all time, the patent office even granted a patent to the idea of using a comb-over to conceal partial baldness:



## How to Reform Patents

These are real patents, and they have a real effect upon competition. (Credit to the App Developers Alliance for several of their examples).

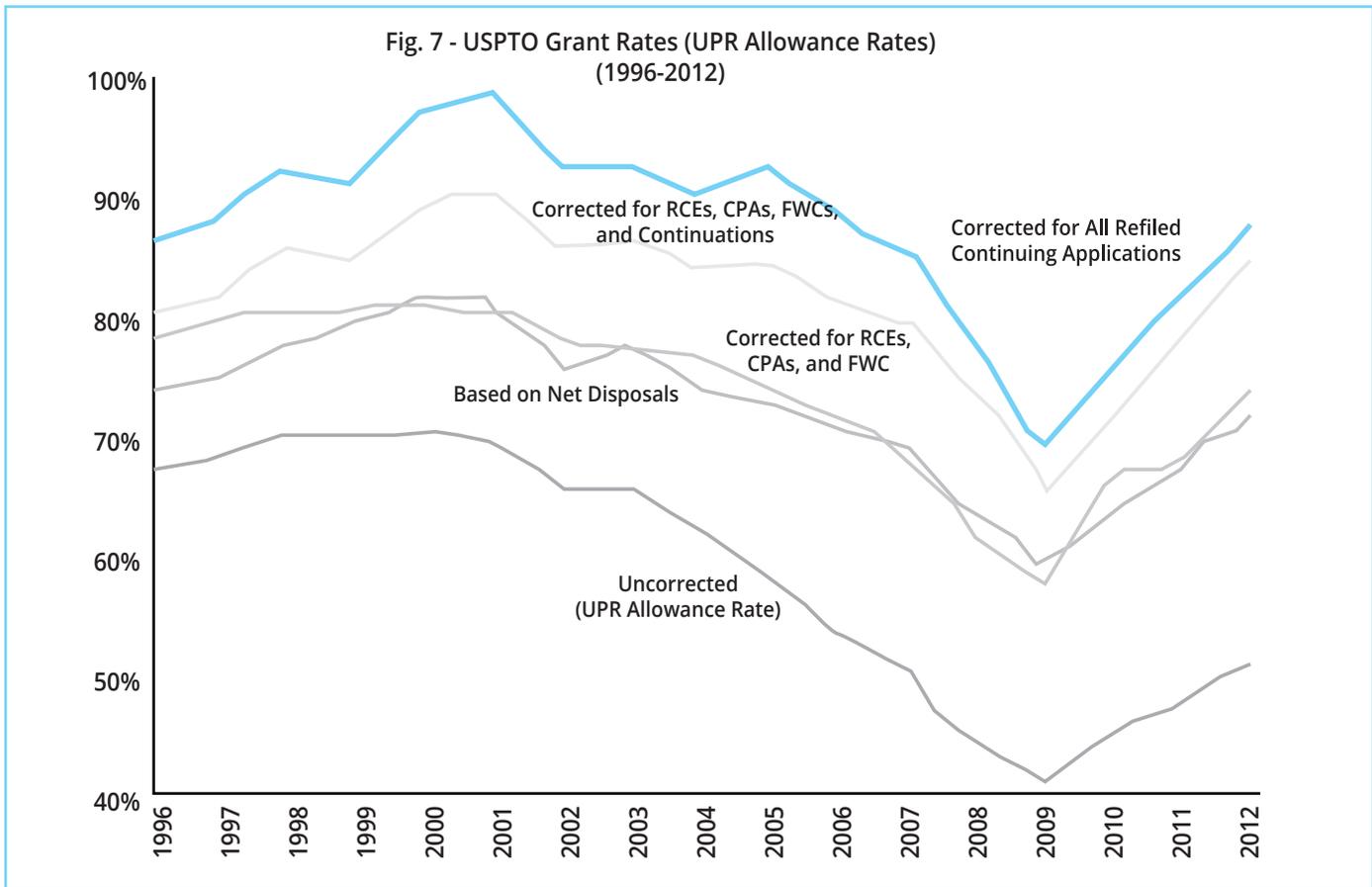
The underlying problem at the heart of patent abuse is low-quality patents and a system that encourages trolling behavior. The solution is to restore a system that abides by the Constitution’s directions to “promote the progress of the sciences and useful arts.”

Patents can encourage innovation, but they are not the only way, or even the primary way, that innovation occurs in the economy. Like any regulation, they have measurable costs and, in many cases, patents are not the right regulatory answer to the problem at hand.

As the FTC concluded in 2003, “Poor patent quality and legal standards and procedures that inadvertently may have anticompetitive effects can cause unwarranted market power and can unjustifiably increase costs. Such effects can hamper competition that otherwise would stimulate innovation.”

*“In both patents and copyrights, there is clearly a strong prima facie case for establishing property rights. Unless this is done, the inventor will find it difficult or impossible to collect a payment for the contribution his invention makes to output. He will, that is, confer benefits on others for which he cannot be compensated. Hence he will have no incentive to devote the time and effort required to produce the invention. Similar considerations apply to the writer. At the same time, there are costs involved. For one thing, there are many ‘inventions’ that are not patentable. The ‘inventor’ of the supermarket, for example, conferred great benefits on his fellowmen for which he could not charge them. Insofar as the same kind of ability is required for the one kind of invention as for the other, the existence of patents tends to divert activity to patentable inventions. For another, trivial patents, or patents that would be of dubious legality if contested in court, are often used as a device for maintaining private collusive arrangements that would otherwise be more difficult or impossible to maintain.”*

*Milton Friedman, “Capitalism & Freedom”*



This is still true today, 12 years later, because the USPTO’s patent approval rates have stayed roughly constant from 2003 to 2012. There have been some changes since 2012, but as of 2012, 90% of patent applications were eventually approved.

As Nobel Laureate economist Gary Becker, a senior fellow at Hoover Institution, explains: “It has long been recognized that patents impose costs on society since patents keep out competition, so that the monopoly power of patent holders enables them to raise prices and lower outputs.”

Most of the time, the free market does fine at encouraging risk taking, even without regulation. Thus, patents are best suited for situations where the underlying research and development costs are so steep that it’s unlikely to be undertaken

unless there is a 20 year monopoly to recoup that investment (i.e., drug development, for example, can cost several hundred million to over \$1 billion, depending on how you count the costs, to bring new compound to market; therefore, without patents, the current model of drug development would likely not work. However much of this cost is due to FDA regulation).

*“The basic quid pro quo contemplated by the Constitution and the Congress for granting a patent monopoly is the benefit derived by the public from an invention with substantial utility.”*

*Brenner v. Manson (1966)*

Patents are a quid-pro-quo, teach the world how to make your invention, and in exchange for making that information public and available for others, you receive a 20 year monopoly—stopping others from innovating upon that idea for 20 years. But in the case of many patents, there was no real invention to be documented or that idea will have no utility 20 years hence. For example, in January, 2015, Windows 95-era patents entered the public domain. Did you hear about the parties thrown by computer programmers at now being able to use Windows 95 patents? What computer programmer rejoiced at the ability to now use them? Of course, 20 years is several lifetimes in technology cycles—Windows 95 era patents are no longer relevant today, which is strong evidence that a 20 year monopoly is unjustified here as it greatly exceeded any potential utility for that technology.

Who thinks a long truck sleeper unit, an upright vacuum cleaner, garments that have an inside out appearance or a carry-out food container are inventions? Apparently the Patent Office does, as those each have recent patents.

Conventional wisdom of the patent system assumes that a single patent covers a single product. Under such a system there would be relatively minimal impact of dubious patents upon new market participants other than by shake-down litigation by patent trolls. But as Mark Lemley notes in “The Patent Crisis and How the Courts Can Solve it,” this is the exception to the rule in the modern economy. Machines have many different pieces and each of these components can itself be subject to one or several patents.

*“Dumbass patents are crushing small businesses. I have had multiple small companies I am an investor in have to fight or pay trolls for patents that were patently ridiculous.”*

*Prominent Venture Capitalist Marc Cuban*

In some industries such as chemistry and pharmaceuticals a single patent normally covers a single product. But in industries like semiconductors, products can incorporate hundreds or even thousands of patents by different companies. Most industries fall somewhere in between. This leads companies to accumulate large patent portfolios for protection in case patents are invalidated, to use as deterrence for counter-infringement suits and to trade in licensing arrangements. This thicket of patents can make it impossible for new participants to compete against established players. Overlapping patent portfolios by large companies could make entering the market impossible, or each company could demand outrageous licensing requirements such as 50% of profit. This is a problem particularly as we know that significant innovation and economic growth comes through creative destruction which requires new market participants. These costs of patents, especially of dubious patents, must be kept in mind when crafting patent policy.

The solutions to the patent problem are not rocket science, but the solutions that Washington has been considering to address the patent problem do not address the underlying epidemic. *Patent trolls are a problem, but big companies are patent trolls too.* Real reform requires fixing the underlying problem.

We at Lincoln Labs are writing this report to show what real patent reform would look like, and here's a few ideas that need to be put on the table for serious reform.

## A. Increase patent quality requirements.

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Patents are required, by law, to only be for inventions that are novel, non-obvious, and useful. This standard may seem clear in principle, but in practice there has been an abject failure to abide by the Constitution's mandate, that patents be granted for the express purpose of "promoting the progress of the sciences and useful arts" and to be rejected if they do not. In 2001, almost 100% of patent applications were eventually granted (according to a study based upon FOIA's USPTO data). In 2007, the Supreme Court established a new standard for "obviousness" through the *KSR v. Teleflex* case, and some argue that this got rid of many of the bad patents. Instead, the data shows that after a brief dip, as of 2012 the patent approval rate was back to around an adjusted 90% approval rate.

A 90-100% approval is an absurdly high level, and some have argued that the patent office has arbitrarily disregarded its statutory mandate in order to reduce their backlog. From 2004 to 2011 there was a 50% increase of patent applications. America didn't magically become 50% more innovative through the recession, instead, companies learned how to game the system by figuring out that the USPTO was granting patents for almost anything, regardless of how novel it was.

This standard must be strengthened to increase patent quality. Increasing patent quality with a higher standard and higher consistency in implementation would *drastically increase competition* and increase—not decrease—research and development. Entire new sectors of the economy would become open to competition. Imagine the innovation and competition of internet startups happening across broad sectors of the economy. Increasing patent quality will also reduce prices to other companies and to consumers, as patented goods are kept at arbitrarily high prices.

One significant effect of increasing patent quality would be knocking out a large number of software patents, such a change would knock out a large number of software patents, perhaps 75-90%, where the economic argument for patents is exceedingly difficult to sustain. Ideas like one-click checkout have no place receiving government protection for 20 years. There are at least seven ways to accomplish this goal:

1. Greater oversight of the USPTO by Congress on poor-quality patents (e.g., bringing USPTO officials before Congress, writing formal letters, forcing the USPTO to answer for nonsense patents). Currently, Congress has done none of this.
2. Reform incentive structure for USPTO. Patent examiner incentive structure, the "count system," must incentivize higher-quality patents and knocking out low-quality patents. Reforms were made recently in 2010, but those reforms addressed the patent backlog and timeline and didn't address quality directly. Reforming patent quality will require changing the "count system" further, even if that means taking on the patent examiner union. Further, the USPTO as a whole currently has an incentive to grant as many

patents as possible because of maintenance fees and their overall incentives must be revised.

3. For categories of patents that have historically been more dubious and problematic, institute “second-pair of eyes” (SPER) rule, requiring that patent applications receive approval by two examiners. The PTO tried such a rule, specifically for many business method patents, but abandoned the rule after data demonstrated success in knocking out poor-quality patents. Lesson can also be learned from USPTO’s “Sensitive Application Warning System (SAWS)” program that tried a similar process.
4. Reform patent examiner “prior art” search. Currently in looking to identify “prior art,” patent examiners search existing patent databases. Prior art search is 99% patent literature. This is convenient because it is standardized, but it is an unacceptable and illogical interpretation of the Congressional statute and leads to preposterous results where well-known prior art doesn’t count because it wasn’t in the form of a patent. This error exacerbates itself continually increasing the scope of what is patentable. The America Invents Act (2011) authorized the USPTO to allow for third-party submissions for prior art. On February 20, 2014, President Obama announced an executive action for the USPTO to allow crowdsourcing prior art, today the USPTO has one such website, but it remains a pilot project that doesn’t allow for easy crowdsourcing. This program needs to be expanded to directly facilitate knocking out bad patents before they are granted, and then even combined with economic incentivizes.

5. Change how USPTO is provided resources to incentivize increasing quality standards by changing USPTO from fee-funded to taxpayer-funded. USPTO funding levels should be set by Congress entirely, at the same, similar or increased level depending on the data.
6. Revise statutory language on the standards for obtaining a patent (i.e., change novel, nonobvious and useful). Strengthen Sections 101, 102 and 103.
7. Create new statutory language to specify that independent creation by others is evidence that the patented idea is not “non-obvious” to someone skilled in the art; if others are creating the same idea at the same time independently then this indicates the idea is obvious to someone of average skill in the art.
8. Change how courts assess patent claims in litigation. Currently courts have a presumption that all patent claims are valid. This is a problem when the patent office is approving 90% of applications and spending a short amount of time to assess the validity to begin with. Changing this presumption would do a lot to knock out bad patents. In particular, it’s illogical for the courts to apply this presumption to prior art that was not known or considered by the PTO.

*Real patent reform requires addressing patent quality.*

**B. Require that patent applications are accessible and provide teachable information for someone of average skill in the art.**

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Patents should be an instruction guide for the world on how to build that invention—if they aren't, then they must be rejected by the USPTO. The current statute already says this exactly: Section 112 requires “patents have a written description of the invention... in such full, clear, concise and exact terms as to enable any person skilled in the art... to make and use the [invention].”

But currently, patents are opaque and often purposefully unclear to be unhelpful to potential competition. By no stretch of the imagination are the Patent Office and the courts following this prescription, so Congress needs to fix it.

If a company wants to keep an invention quiet, they have that option—that is what trade secrets are for (i.e. Coca-Cola keeps the Coke formula secret forever).

*You should be able to read a patent, and from that patent be able to implement that invention upon its expiration (and know what one is prohibited from doing during its protection term)—yet, with software in particular, that is impossible. These vague patents are written with broad/general ideas for the purpose of suing a large number of people later on for anything tangentially similar.*

Has anyone every heard of an engineer going to the patent office and looking at the patent to learn how to do software? You should be able to read a patent, and then implement what the patent is supposed to be doing. And if the patent doesn't allow that, then it is not a patent and is per se invalid.

*To fix this, Section 112 needs to be further strengthened and Congress need to have hearings on this topic to pressure the USPTO to follow the law.*

## C. Reduce or eliminate “business method patents” and “design patents.”

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Amazon's one-click checkout and Priceline's reverse auction are examples of business method patents. There doesn't appear to be a sensible economic rationale for business methods to be protected through government-granted monopoly: Amazon's CEO has even said that without a patent they would absolutely have still “invented” one-click checkout.

The free market means when someone tries a new business method, others can borrow, compete and improve upon that first business method; this is an essential fact about how the free market works. Entire business programs are devoted to studying the business models of various companies in different markets and applying those same strategies to new markets (see Harvard MBA case studies).

Very often, the first company to try a business method introduces the concept to the world and then loses in the marketplace. For example, Facebook was not the first social networking website—it launched well after Friendster and MySpace had successfully pioneered the concept; Google was not the first search website—it went live well after Yahoo, Lycos and Altavista were well-established search providers.

This entrance by new competitors is at the heart of innovation; it's how the economy grows.

In a competitive marketplace, often the first entrant with a new business model loses because of poor

execution, misreading their consumer base, or failing to invest in better technology. This is a feature, not a bug, of the free market. But if that first entrant can secure a business method patent, it can secure its “first mover advantage” and never be forced to execute well and compete in the marketplace. This is terrible for competition and innovation. What is the economic argument to sustain this cost to the economy? There is generally no need for regulation to protect the first mover advantage—if anything, we would prefer less first mover advantage in the economy to encourage new entrants. For years the PTO took the position that “methods of doing business” were not patentable. But over time this has been relaxed, especially in the 1998 *State Street Bank* case. Congress should rethink or eliminate them as they are generally antithetical to creative destruction.

Design patents can also slow innovation and the economic argument for them is also dubious. From 1997 to 2007, the number of design patents issued per year increased from 2,000 to 20,000. Many of these were for the consumer electronics and graphical user interfaces where there may be often only a few ways to design technology.

Apple has a design patent on “slide to unlock” and rounded rectangles, preventing any new competitors in the smartphone market from creating phones with these features. They even threatened to sue Google when Google sought to implement a similar unlocking process with a 3 by 3 grid, forcing Google to adopt a 4 by 4 grid. Designs are regularly copied throughout the economy; that is how competition functions and is the reason designs are rarely protectable (fashion has minimal IP protection).

Design patents were originally created before trademark law existed. Trademark law importantly ensures that consumers are not confused about what products are made by whom. Now, particularly with the availability of trademark law, it is generally unnecessary and counter-productive for patent law to also grant a monopoly for a design. This may be most true in the case of software and consumer electronics, because often one design is the only or best design for that technology (such as rounded rectangle phones which are patented by Apple). There is minimal economic justification for this type of restriction upon competition.

This becomes more egregious when the second research team was working on a completely different problem and had no reason to know of the original patent’s applicability to their work. This often happens when the original patent’s claims were so broad as to now cover market models and new area of research that didn’t even exist when filed. In the case of pharmaceutical patents, usually the scope is clearly and precisely explicated through chemical formulas, making it difficult to accidentally violate someone’s patent. But patents outside of pharmaceuticals often include abstract language that allows for differing interpretations and can then apply to new scientific fields and applications that were completely unknown when the patent was filed.

While recent Supreme Court decisions, *Bilski* (2010) and *Alice* (2014), have started to rein in business method patents, more can be done by Congress to significantly reduce business method patents and design patents to be granted only when they have economic justification—when granting them will “promote the progress of the sciences

and useful arts,” the language of the Constitution on when patents should be granted to begin with.

## D. Create independent invention defense.

In the absence of actual alleged copyright, a patent holder should not be able to sue an innovator. This is the law for copyright and trademark law already, where if someone creates something substantially similar to another, but can prove that they didn't or couldn't have copied, then they are not infringing or violating a trade secret.

Outside of the pharmaceutical industry, more than 95% of patent lawsuits are filed against defendants who developed the patented idea on their own (not who claimed to have developed the patented idea on their own, but those whom the litigant claims

### *CRISPER/Cas9 and Independent Invention*

*One of the biggest developments in medical science in the past 20 years has been the development of gene-editing technology known as CRISPR/Cas9 (“CRISPR” for short). CRISPR was first discovered as a bacterial defense mechanism 25 years ago, and over time it has been perfected to allow the same mechanisms used by bacteria to be turned into a “gene editing” tool to cut DNA strands. Dozens of research teams have been working on CRISPER this for the past 25 years, with pace picking up significantly in intensity in the past five years. CRISPER has fostered a new revolution in genomics, allowing researchers to surgically edit DNA almost as easily as a Microsoft word document. Wired Magazine called it the “Genesis Engine” boasting “We now have the power to quickly and easily alter DNA. It could eliminate disease. It could solve world hunger. It could provide unlimited clean energy.”*

*Over this 25 years history, CRISPER-related patents have been filed from its use in yogurt production,*

*to a potential treatment for Huntington’s disease, but only recently was there an attempt to patent the entire technology platform itself for a wide array of applications. On June 28, 2012 Jennifer Doudna and Emmanuelle Charpentier’s team published their results in Science on how to use CRISPER as a tool for genome engineering. In 2013, they applied for a patent on using CRISPER as a platform for genome engineering. Seven months later Feng Zhang filed for a different patent on CRISPER, specifically on using CRISPER as a platform for genome engineering but for humans.*

*Zhang had applied for a fast-track patent, so on April 15, 2014, the USPTO awarded the patent to Feng Zhang. Since the Doudna/Charpentier patent application claims much of the same technology as the Zhang patent, their application may only be granted with significant revisions limiting its scope. Or alternatively, their patent could be granted and then invalidate some of Zhang’s claims. But Doudna and Zhang aren’t the only ones competing over claims to CRISPER, internationally, ToolGen is a South Korean genome-editing company that has an international patent which covers CRISPER as a platform also. Analysts estimate that sorting out this mess could take another 3-5 years.*

*But this technology is one of the most significant medical research breakthroughs in decades, allowing for precision DNA editing, so researchers and companies aren’t waiting for the law to settle, and there has been an explosion in CRISPER related research. Meanwhile some companies are paying a license fee for Zhang’s patent only. While other companies are paying multiple fees to license Zhang’s patent, ToolGen’s patent and other’s potential patents. Many of these companies that will pay license fees to avoid liability actually developed CRISPER internally as a platform, well before Zhang’s patent was filed. Thousands of research teams have done CRISPER related research, and now they may have to pay a fee to continue the research they had started often before anyone patented anything.”*

*This is one of many examples of independent inventions of very similar concepts at a similar point in time, demonstrating the need for an independent inventor defense.*

were not copied— 95% of non-pharma patent infringement complaints don't allege copying that would qualify for higher damages).

Imagine the injustice and the impact upon the market of these lawsuits if these inventors truly invented independently. If one inventor is working upon an idea then is told that their independent creation violates another's patent, the government comes in and says: "Person A gets to sell this product. But Person B who also came up with the same or similar idea, we will come to your house or place of business, confiscate your invention, destroy your inventory, and issue an injunction legally barring you from selling anything tangentially related to your own research." This becomes especially problematic, when the second research team was working on a different problem and the original patent was so broad as to now cover this new invention.

We don't have to hypothesize that independent invention happens, we have anecdotal and empirical data to show it's a common occurrence. Consider the story of Alexander Graham Bell, Elisha Gray and Antonio Meucci on who were all working on the technology that would become the telephone. Bell and Gray both filed patents on the same day on telephone, while Italian inventor Antonio Meucci had done much of the initial work and had announced his findings five years before Bell and Gray's patents were filed. Bell was granted a patent for having invented the telephone first, but to this day there requires controversy. One thing is clear from this story, multiple teams were working on the same technology, but only one received a patent.

Already, courts look to actual copying versus independent creation when determining whether the

patent infringement is "willful." Thus, this defense will simply borrow from copyright law based upon an altered version of the analysis already done in patent cases. As is the case with copyright and trademark law, if someone can't substantiate independent creation (usually quite difficult to do), then they wouldn't qualify for the defense.

## E. Make the loser pay.

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In the Founding Era, those who brought patent lawsuits and lost had to pay the costs of litigation; this is called *loser pays*. Until recently, it was the reverse, with no incentive for patent trolls to not bring lawsuits that could border on legally frivolous. Recently, there has been more interest by the courts in loser pays, but legislation can make this clearer (the recent 2014 Supreme Court case *Octane Fitness v. Icon Health* did some work to shift to a loser pays system. But more work remains). Those who bring meritless claims should have to pay for the litigation—doing so will drain the swamp of patent trolls.

Patent trolls' shake-down routine involves finding out the expected court costs for litigation and filing a demand letter for under that number. Since defending a patent claim costs over \$1 million, these trolls can send a letter demanding \$100-400,000 knowing that many will take that deal to avoid litigation, even if they aren't infringing. But with loser pays, this equation is reset. If the company is on solid ground, they won't pay \$400,000 to make a troll go away; rather, they can defend it in court knowing that their legal costs will be recouped. Trolls who sue with poor legal arguments would gradually become bankrupt, keeping patent litigation intact for legitimate claims of infringement.

## F. Increase pleading requirements.

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Filing a patent infringement claim should require specificity on the allegations, not blanket statements (since this is explained elsewhere, this report doesn't focus upon how to do this here). Transparency is important overall, requiring patent holders to say who they are and what they own, etc.

## G. Speed up USPTO approval and rejection processes.

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Patents are one of the primary ways the federal government regulates the private sector. This regulation must be done as quickly and efficiently as possible. Currently, the response time for a patent application is three to five years. Due to a backlog, it can be over a year before the patent application is even looked at for the first time. The total time spent looking at a patent application is estimated at eighteen hours on average. The easiest way to get rid of a patent is to grant it, rather than to reject it, investigate prior art further or ask for more information—this is a perverse incentive. Thus, it shouldn't be surprising that approximately 75% of patents are granted by the PTO.

It's likely that this backlog leads to more low-quality patents, but even if it doesn't, three to five years is too long for anyone to wait. Alexander Graham Bell got his patent to the telephone in less than four weeks in 1876. For high-quality patents, innovators need to gain certainty quickly and receive quick protection for their invention instead of waiting a technological generation.

How does one reduce patent approval time while increasing patent quality? Well many patents

granted are bogus patents that are not truly novel and should never have been granted. If the PTO increases quality, then less dubious patent applications will be filed. Consider that between 2004 and 2011 there was an increase in approved patents of 50%. With an adjusted patent approval rate of almost 90% in 2011 it's no wonder that so many caught on that the PTO was essentially no longer enforcing quality requirements and would approve almost any application. Restoring patent quality requirements will reduce the number of patents filed, because bad actors will know that the game is up. Further, knocking out these junk patents early can help reduce the backlog.

Crowdsourcing initiatives, properly implemented, would help patent examiners to more easily knock out these bad patents. Since prior art searching is a big part of the patent approval process, bringing others in to assist could further reduce the backlog. And lastly, if the patent office is a regulator of innovation and technology, we have an interest in making the process as quick as possible, even if that requires a small increase in funding. The uncertainty to the economy of filed but unapproved patents is such that policy-makers should make steps necessary to ensure this uncertainty period is as brief as possible.

## H. Couple the U.S. patent system with other systems to encourage innovation.

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Patents are one method of solving a market failure and thereby subsidize innovation “to promote the progress of the sciences and useful arts,” but they are not the only method to do so and, far from being free, they instead come at an extremely high

expense to the rest of the economy and liberty. Often Washington acts as if patents are the only method to incentivize innovation, but it's not, and it is often not the best method at all.

Incentivizing research and development is a noble goal, but more regulation is usually not the answer. The government has a critical role in funding basic science research and many technologies receive minimal investments in the private sector as a direct result of limitations upon the patent system. The solution isn't to expand patents even further, but rather to couple patents with alternative methods to incentivize basic science and other innovations that may not be immediately commercializable.

3D printing for organs, for example, is a critical research area in need of billions of federal dollars, because it's unlikely that the private sector will have the incentive to invest appropriately and because 3D printing organs will save the federal government many billions of dollars, thus paying for itself very quickly (federal government spends over \$50 billion a year in kidney dialysis alone, which would be largely eliminated with 3D printed kidneys). Investments in better battery technology is another basic science area in desperate need of federal research dollars.

One method to do this is worthy of consideration: create  $x$  prizes for the development of certain technologies that will save the federal government enormous amounts of money, and then pay for the prizes out of the projected costs savings.

## Conclusion

James Madison warned us 200 years ago to guard patents and copyrights with “strictness against abuse.”

Patent trolling, created and exacerbated by modern patent policy, is one manifestation of that abuse and is increasingly stifling competition, reducing innovation, and limiting potential economic growth. More than nearly any other instrument of government policy, getting patent policy right is critical to innovation and growing the economy. If Americans want robust innovation and competition, then they must confront this cronyism in our midst and demand free markets and free competition without the government choosing winners and losers by granting patents for non-inventions. Less regulation will lead to more competition and more innovation.

As the Supreme Court explained in *Sears*, “Patents are not given as favors [They] are meant to encourage invention by rewarding the inventor with the right, limited to a term of years fixed by the patent, to exclude others from the use of his invention.” The Court explained the significance of avoiding monopolies in *Bonito Boats*: “The Patent Clause itself reflects a balance between the need to encourage innovation and the avoidance of monopolies which stifle competition without any concomitant advance in the ‘progress of science and useful arts.’” It is now time to reset that balance.

*Liberty means the freedom to take a new idea, raise capital, manufacture a product, and sell it to the consumer and win or lose on the merits of your idea—not on which lobbyist you've hired or lawyer you've gotten to file your claims to the Patent Office for non-inventions.*

In recent years we have heard stories of patent abuse at the hands of so-called patent trolls, non-practicing entities. The problem with merely going after “patent trolls” is that big companies act as patent trolls

too, not just non-practicing entities. Every time the government grants a patent to something that is not an *actual* invention, the government is monopolizing a market to one participant and putting a brake on innovation for 20 years until that patent expires—and that’s a long time in the cycle of modern technology. Our liberty and economic vitality is jeopardized when so many industries are calcified by government-granted monopolies for non-inventions stifling potential innovations, and when patent trolls sue inventors and small businesses for operating Wi-Fi or for having a podcast. Thus, patent reform is an essential part of restoring economic liberty.

Low-quality patents can be easily addressed with a few simple reforms, some of which include:

1. Increasing statutory patent quality requirements;
2. Providing greater Congressional oversight of the Patent Office for poor-quality patents;
3. Reforming the incentive structure at the Patent Office to favor high-quality patents;
4. Instituting a “second-pair of eyes” rule;
5. Reforming the patent examiner “prior art search” by specifically implementing crowdsourcing;
6. Creating an independent creation defense;
7. And strengthening Section 112 to ensure that patents are an instruction guide for how to build the invention rather than deliberately vague.

Granting individuals or corporations the power to restrict others’ liberty and thereby reduce competition in the marketplace can have obvious pernicious effects when abused. It is well past time for Congress to fix the patent system, which will grow the economy by opening the floodgates to more competition, risk-taking, and innovation.

## About Lincoln Labs

Lincoln Labs is made up of entrepreneurs and technologists who believe that technology and innovation are key ingredients to a more free society. Both online and offline, we actively bring together the most thoughtful minds from the worlds of tech, policy, and politics to discuss how best to solve our biggest problems. We believe in the entrepreneurial spirit. We believe in optimistic and solutions-oriented thinking. Through hackathons, meetups, policy discussions, and online engagement, Lincoln Labs is creating and supporting a community of like-minded individuals who desire to advance liberty in the public square with the use of technology.

## About Derek Khanna

Derek Khanna was listed on *Forbes*’ “30 Under 30 for Law and Policy” after spearheading a national campaign that resulted in the last technology bill being enacted in August 2014, changing copyright law to allow consumers to legally unlock their phones and thereby increasing market competition and consumer choice. He was previously a staffer with the House Republican Study Committee and for Senator Scott Brown, and has spoken at the International Consumer Electronics Show, South by Southwest, Personal Democracy Forum, and the Conservative Political Action Conference. He received a B.A. from the University of Massachusetts at Amherst, a J.D. from Georgetown Law, and had a fellowship with Yale Law School’s Information Society Project.