



Patent Licensing:

The Founding Fathers' Secret for Economic Success

By Jon Dudas and David Kline

PATENT LICENSING: THE FOUNDING FATHERS' SECRET FOR ECONOMIC SUCCESS

By Jon Dudas¹ and David Kline²

To read the press today, you would think patent owners who do not make or sell products—called “non-practicing entities” or NPEs—are all “patent trolls” who corrupt the innovation-promoting benefits of the patent system. This was unfortunately also the message from the White House on June 4, 2013 when it issued executive orders and legislative proposals targeting patent owners who, in the words of President Obama, “...don’t actually produce anything themselves.”

The truth is, however, that even though startup companies, university researchers, and technology licensing firms don’t manufacture products themselves, they still produce enormous value for the U.S. economy. NPE technology developers like Dolby in sound systems and Tessera and Qualcomm in semiconductors, for example, help the U.S. maintain its technology leadership in critical economic sectors.

Meanwhile, professional intellectual property management firms like Conversant—an NPE that licenses patents and also develops NAND Flash computer memory technology—act as intermediaries. They facilitate the transfer of new technologies to firms that are best equipped to develop them into new products, services and medical treatments that benefit society.

Patent licensing has proven to be especially valuable in today’s outsourcing-heavy economy, where so many once-vertically integrated firms have spun off their product manufacturing operations to other firms and other countries. It enables these firms to focus on what they do best—invention in the case of R&D leaders, or manufacturing and sales in the case of product companies. With an estimated value in the U.S. of \$150 billion annually in 2006,³ patent licensing also provides greater liquidity to the market for new technological innovations, lowers transaction costs, and makes the market itself more efficient.

THE FOUNDING FATHERS CREATED NPEs

Yet still the myth persists that all NPEs are “patent trolls.” To be sure, there is a “patent troll” species of NPE that abuses the litigation process to extort nuisance settlements from small businesses unable to pay the huge costs of standing up to them in court. But these trolls—the patent law equivalent of “ambulance chasers” in personal injury law—should not be confused with legitimate NPEs whose primary business is invention and/or patent licensing, not litigation.

Nor are legitimate NPEs anything new in our economy. In fact, most people will be very surprised to learn that NPEs and patent licensing were actually authorized by the U.S. Founding Fathers 233 years ago as a way to kick-start the development of the new American economy.

Remember, at the time of its founding, America had a backward agrarian economy, almost wholly-dependent on imports, and lacking in any significant domestic industry. The U.S. at the time had a standard of living lower than that of many South American countries.⁴

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3 *Patent Licensing and the Emergence of a New Patent Market*, Houston Business and Tax Journal, 2009.

4 Stanley L. Engerman and Kenneth L. Sokoloff, *Factor Endowments: Institutions, and Differential Paths of Growth Among New World Economies: A View from Economic Historians of the United States*, National Bureau of Economic Research Historical Working Paper No. 66, 1994.

In addition to creating lasting democratic institutions of governance, the Founders also faced the critical task of finding some way to unleash the latent creative and productive potential of the American citizenry. As Thomas Jefferson wrote to his daughter Martha in 1787, precisely because America was deprived of British imports and left to its own devices, “we are obliged to invent and execute; to find means within ourselves, and not to lean on others.”

But how, exactly, could they do that?

The Founders had studied the elitist British patent system, and they knew that patent fees there were 11 times the per capita income of the average citizen and that patent holders were required to practice or “work” their patents—i.e., manufacture products from their inventions. According to Bowdoin College historian Zorina Khan—her book “The Democratization of Invention: Patents and Copyrights in American Economic Development, 1790-1920” earned the Alice Hanson Jones prize in 2005 for outstanding work in economic history—the Founders also knew that these high fees and “working requirements” restricted innovation activity to a tiny handful of wealthy individuals with the factories (or the capital to build factories) needed to manufacture products. (In fact, says professor Khan, the exclusion of the “working classes” was regarded by British parliamentarians as one of the chief virtues of their patent system.) These high fees and working requirements also skewed invention towards incumbent capital-intensive industries, rather than the disruptive new industries that usually spark great economic advances.

Clearly, the British patent model would not work for the United States, whose only asset (other than natural resources) was a population widely-considered to be unusually enterprising. Unlike the tenant farmers and laborers that made up the bulk of England’s rigid class society, most Americans were free-holding small farmers, merchants, shopkeepers, artisans, and mechanics—the forerunners of what we today call the middle class—who were possessed of what 18th century publisher Hezekiah Niles called “a universal ambition to go forward.”

A PATENT SYSTEM FOR THE COMMON MAN

In order to rapidly develop the U.S. economy, then, the Founders “quite self-consciously” (to quote economic historians Naomi Lamoreaux at Yale and the late Kenneth Sokoloff of UCLA) designed a patent system that could do what no other had ever done before—stimulate the inventive genius and entrepreneurial energy of the common man. Simply put, they needed to expand the pool of productive inventors in our new nation to include as many people as possible, even those without the wealth or resources to commercialize their own inventions.

They did this by first of all setting patent fees to a level any ordinary citizen could afford—less than five percent of the rate in Britain. Second, they decided not to impose working requirements on patentees. During the debate over HR-41 (the bill that became the first patent law in 1790), says professor Khan, “the Senate suggested requiring patentees to make products based on the patent or license others to do so, but the House rejected this as an infringement of patentee rights.” And third, they wrote the patent law expressly to facilitate the licensing and sale of patent rights, thereby creating the world’s first patent licensing industry.⁵

The results, as Jefferson would write 13 years later, have “given a spring to invention beyond my conception.” Indeed, the low patent fees, lack of working requirements, and ability to license patent rights turned inventing into a new income-earning career path for thousands of poor but technically-creative citizens. Whereas

⁵ Naomi R. Lamoreaux and Kenneth L. Sokoloff, *Inventive Activity and the Market for Technology in the United States, 1840-1920*, National Bureau of Economic Research Working Paper No. 7107, 1999.

most of Britain's few hundred inventors came from wealth and privilege, the vast majority of America's many thousands of inventors came from humble beginnings. They were farmers, workers, merchants, mechanics, and artisans.

“Patent licensing turned inventing into a new career path for thousands of poor but technically-creative citizens.”

Of the 160 so-called “great inventors” of early nineteenth century America, over 70 percent had only a primary or secondary school education.⁶ Half had little or no formal schooling at all. And many of the most famous names in American invention—Matthias Baldwin (locomotive), George Eastman (roll film), Elias Howe (sewing machine), and Thomas Edison (electric light and phonograph)—had to leave school early to support their families.

“The rapid growth of inventive activity during early American industrialization was characterized by a disproportionate increase in the involvement of segments of the population with relatively common sets of skills and knowledge,” noted professors Sokoloff and Khan. “Rather than being accounted for by an elite who possessed rare technical knowledge or commanded large amounts of financial resources, the rise in patenting coincided with a broadening of the ranks of patentees to encompass many individuals [and] occupations.”⁷

U.S. INVENTION RATE SOARS

The U.S. quickly became a nation of tinkerers. As more citizens saw that they could make a living by applying a little “Yankee ingenuity” to the problems of agriculture and industry, the U.S. per capita patenting rate, defined as the percentage of citizens who became inventors, soared. By the time of the Civil War, it was three times that of Britain, according to the annual reports of the commissioners of patents in both countries. Each U.S. patentee also tended to be more prolific than his or her British counterpart, and by mid-century, the U.S. was patenting five times the number of inventions as Britain each year, even though our populations were roughly equal in size. By 1885, our per capita patenting rate was more than quadruple the rate in Britain, and 85 percent of U.S. patents were licensed.⁸

Patent licensing, in fact, was the primary means by which inventions were turned into new products in the decades before in-house corporate R&D departments arose in the early 20th century. Publications such as *Scientific American* were founded specifically to facilitate the trade in patents, and the magazine regularly featured descriptions of interesting new patents, which commercial enterprises then licensed or purchased to use in their product development efforts.

American Bell Telephone's new product pipeline, for example, worked like most others at the time. Its 1894 annual report noted that the company's R&D department licensed 73 patents from outside inventors that year, while developing only 12 from its own employees.

In the words of a new Government Accountability Office (GAO) report on NPEs, “History is filled with examples of successful inventors who did not develop products based on the technologies they patented.”⁹

⁶ B. Zorina Khan and Kenneth L. Sokoloff, *Institutions and Technological Innovation During Early Economic Growth: Evidence from the Great Inventors of the United States, 1790-1930*, National Bureau of Economic Research Working Paper 10966, 2004.

⁷ Khan and Sokoloff, *The Democratization of Invention During Early Industrialization: Evidence from the United States, 1790-1846*, Working Paper No. 578, Department of Economics, UCLA, 1989.

⁸ B. Zorina Khan, *The Democratization of Invention: Patents and Copyrights in American Economic Development, 1790-1920*, Cambridge University Press, 2005.

⁹ Intellectual Property: *Assessing Factors That Affect Patent Infringement Litigation Could Help Improve Patent Quality*, Government Accounting Office, August, 2013.

The GAO report specifically cited the case of Elias Howe, who patented a method of making a lockstitch but did not produce sewing machines. Instead, Howe licensed his patents to the Singer Company, which then deployed Howe's invention in its sewing machines.

Then as now, of course, a crucial role was played by a wide array of intermediaries—lawyers, venture financiers, and patent licensing firms—who according to Lamoreaux and Sokoloff, “lowered the transaction costs and improved the efficiency” of the trade in and commercialization of patented technology. “By enabling, indeed encouraging, inventors to focus on what they did best [i.e., invention],” they wrote, “this division of labor gave rise to the most technologically fertile period in American history.”¹⁰

“Patent records reveal that more than two-thirds of America’s great inventors, including Thomas Edison, were NPEs.”

The Founders’ decision to foster non-practicing entities and a patent licensing industry proved crucial to America’s rapid technological progress and economic growth. Patent records from the 19th century, in fact, reveal that more than two-thirds of all the “great inventors” of the Industrial Revolution, including Thomas Edison and Elias Howe, were non-practicing entities who focused on invention and licensed some or all of their patents to outside enterprises for commercialization into new products.¹¹

The results of this division of labor were exactly as Adam Smith predicted. “Observers attributed much of the country’s rapid technological progress to its distinctive patent system,” noted professors Lamoreaux and Sokoloff. “Quite revolutionary in design at inception, the U.S. patent system came to be much admired for providing broad access to property rights in new technological knowledge and for facilitating trade in patented technologies. These features attracted the technologically creative, even those who lacked the capital to directly exploit their inventions...and also fostered a division of labor between the conduct of inventive activity and the application of technical discoveries to actual production.”¹²

The benefits of such specialization remain visible today, embodied in the thousands of university and other NPE patents licensed by companies large and small each year. Forget for a moment the billions of dollars’ worth of industry patents licensed or sold each year and all the new products they spark. Just from university NPE patents alone, more than 5,000 new products and 7,000 new companies have been launched over the last 30 years.¹³

This is what some media commentators ignore when they try to tar all non-practicing entities with the same brush as “patent trolls.”

HOW TO SPOT A PATENT TROLL

How can you distinguish a legitimate NPE licensing firm from a troll? It’s simple: examine their actual behavior, not their identity as NPEs.

Legitimate NPEs employ a rigorous due diligence process to ensure that the patents they license are of good quality and highly likely to be upheld as valid by the courts and by patent office trial boards. Just as companies

¹⁰ Lamoreaux and Sokoloff, *Intermediaries in the Market for Technology: 1870-1920*, National Bureau of Economic Research Working Paper No. 9017, 2002.

¹¹ Sokoloff and Khan, *Intellectual Property Institutions in the United States: Early Development and Comparative Perspective*, Report for a World Bank Research Workshop, July 17-19, 2000.

¹² Naomi R. Lamoreaux and Kenneth L. Sokoloff, *Financing Innovation in the United States: 1870 to Present*, MIT Press, 2009.

¹³ Joseph Hornett and David Johnson, *Bayh-Dole Act Restructured How Small businesses, Universities Commercialize New Technologies*, Purdue Research Foundation, 2010.

that manufacture products do, a legitimate licensing firm generally will resort to litigation to enforce its valid patents only after protracted good-faith negotiations with potential licensees have proven unsuccessful, or when the accused infringer has created a reputation as an aggressive litigator. They do not use the threat of litigation to seek nuisance settlements, nor do they threaten litigation against startup companies, product retailers, or retail consumers unless they directly compete with the licensor.

Patent trolls, on the other hand, often use low-quality or overbroad patent claims to threaten litigation against hundreds of small businesses each year, even retail establishments such as coffee shops and hotels. They claim these businesses are infringing their patents simply by doing something as innocuous as scanning a document to email or offering WiFi access to customers. They then demand settlements of a few thousand dollars or threaten the business with an infringement suit that can cost literally millions of dollars to defend against.

These suits are known as strike suits—i.e., suits filed to extort nuisance settlements that are less than the cost of litigation—and are unfortunately nothing new in American courts. Similar suits are also filed every year in the personal injury, product liability, and shareholder rights arenas. In fact, personal injury and product liability suits outnumber patent suits by 10 to 1 every year. And given all the stories of ambulance-chasing lawyers and faked whiplash injuries, not to mention of people carrying cockroaches into fast-food joints and crying foul, it's likely there are many times more abusive personal injury and product liability suits than abusive patent suits each year.

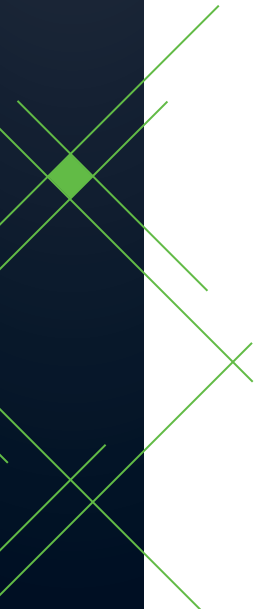
Abusive patent suits, however, are today generating public outrage, and it's easy to see why. These patent trolls are corrupting a vital and venerated social compact to promote innovation by granting to inventors the exclusive right to profit from their discoveries for a limited time.

What can be done to stop them? The courts can, and increasingly do, sanction abusive litigants by making them pay the legal costs of the defendants they falsely accuse. And lately there have been calls from Congress and from the judiciary to apply these sanctions more often. But while we can certainly reduce abusive litigation, we may never do away with it completely. It's the price we pay for ensuring free and open access to the courts by every citizen.

As for universities, R&D leaders, and legitimate patent licensing firms, these NPEs will remain a vital contributor to the U.S. economy—and as always, a fertile incubator of the next generation of startup companies that go on to change the world.



NOTES





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