A series of memos to President-elect Obama identifying policy areas where his words line up with our vision.

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Promoting Innovation with Patent Reform

A Memo to President-elect Obama

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A system that produces timely, high-quality patents is essential for global competitiveness in the 21st century. By improving predictability and clarity in our patent system, we will help foster an environment that encourages innovation.

—Obama–Biden, "Plan for Science and Innovation"[1]

Intellectual property is to the digital age what physical goods were to the industrial age. Barack Obama believes we need to update and reform our copyright and patent systems to promote civic discourse, innovation and investment while ensuring that intellectual property owners are fairly treated.

—Obama, '08, "Connecting and Empowering All Americans"[2]

PRESIDENT-ELECT OBAMA, you are right to recognize that our intellectual property system is absolutely essential to the global competitiveness of America and its leading industries. Our current patent system, though far from perfect, has been the midwife of American innovation, and with its protections, U.S. companies have become leaders in a great many fields, from pharmaceuticals and biotechnology to microchip design and high-performance computing. Whatever its faults, our patent system has done far more to "promote the Progress of Science" than any other government policy or program.

For this reason, patent reform presents risks as well as opportunities. Improving patent quality while reducing the amount and expense of litigation is a goal that all stakeholders in the patent system,

as well as citizens generally, share, but certain proposals to accomplish that end would actually undermine the certainty of patent rights to the detriment of most innovators and investors. Other proposals intended to reduce abusive litigation would increase the time and expense of prosecuting legitimate claims of infringing use. Bad reforms that do not take into account the interests of all who rely on patent protection could end up harming the climate for innovation in America at a great cost to jobs, the economy, and our standard of living.

To avoid that outcome, it is essential to consider the patent system's flaws in the context of its broad, unparalleled success. In general, this approach counsels rejecting indiscriminate proposals that would undermine the core strengths of the system. Instead, Congress and the Administration should favor narrower reforms that target specific flaws and shortcomings.

Especially to be avoided are proposals that undermine the certainty of intellectual property rights, because these rights are the core of the system's strength. Similarly, proposals that erode the enforceability of those property rights must also be subject to strong scrutiny. In contrast, reforms that improve the efficiency of the current system and deter abuses without undermining fundamental rights will only make the system stronger and foster innovation.

A simple test to measure reforms is whether they are likely to increase or decrease investment in industries that rely on patent protections to foster innovation. Most reforms that satisfy this standard concern the issuance process rather than patent enforcement. This is a fundamental point: Reforms that improve patent quality and timeliness will also reduce post-issuance abuses, as well as litigation, without affecting the rights of innovators.

To improve the climate for innovation in America, you and your Administration should:

- **Insist on patent reform that promotes innovation across the entire economy.** Special interests are angling for advantage within America's patent system. In particular, some favor weakening intellectual property protections, arguing that the enforcement of intellectual property rights is actually a brake on innovation in fast-moving fields. While it is true that some firms, often referred to as "patent trolls," have been able to leverage low-quality patents to extract royalties from true innovators, there is little evidence that such behavior has actually retarded innovation; indeed, there is evidence that such firms specializing in litigation actually contribute to the growth and innovation of high-tech startups.[3] Further, the "troll" designation has become overused to the point that many include within its meaning all non-practicing entities that seek to enforce their property rights.[4]

  This sort of rhetoric is no substitute for careful consideration of the means by which abuses occur. Such careful study shows that abuses, though not insignificant, are relatively rare compared to legitimate enforcement actions[5] and that sweeping proposals for "reform" would undermine the rights of all groups—innovators, legitimate rights holders, and the few trolls—to the benefit of businesses that have achieved large market shares by using others' intellectual property.

  The most dangerous and divisive proposals are those that shift the patent system further from its property roots to the benefit of infringers. These include limits on remedies for infringement that force damages for willful misconduct to match voluntary license fees (rather than merely using such fees as a relevant factor); further restrictions on injunctive relief; and adding additional hurdles to enforcement. Such proposals would provide, in the words of one well-known

1. Obama–Biden, Investing in America's Future: Barack Obama and Joe Biden's Plan for Science and Innovation, http://www.barackobama.com/pdf/issues/FactSheetScience.pdf (January 13, 2009).
2. Obama '08, Barack Obama: Connecting and Empowering All Americans Through Technology and Innovation, http://www.barackobama.com/pdf/issues/technology/Fact_Sheet_Innovation_and_Technology.pdf (January 13, 2009).
3. *See generally* Ronald Mann, *Do Patents Facilitate Financing in the Software Industry?* 83 Tx. L. Rev. 961, 981–90 (2005).
4. Spencer Hosie, *Patent Trolls and the New Tort Reform: A Practitioner's Perspective*, 4 I/S: J. L. & Pol'y for Info. Soc'y 75, 85 (2008) ("[A] patent troll is always just 'the other guy.'").
5. *Id*. at 83, 86.

innovator, "a government bailout of the infringement problems big tech companies made for themselves."[6] They would directly reduce innovators' ability to profit from their inventions, undermining their incentives. Smaller firms that lack the leverage to negotiate with market leaders would suffer disproportionately, dealing a blow to the entrepreneurialism that has driven advances in so many fields.

To avoid that outcome, patent reform must adopt a consensus approach that does not favor any one industry's or coalition's narrow agenda. Playing favorites with the patent system is risky and likely to fail, both politically and economically. Rather than adopt a shortsighted approach, patent reform should improve efficiency and promote innovation across the entire economy.

- **Reject "reforms" that reduce the certainty of intellectual property.** Reducing the certainty of intellectual property—that is, increasing the likelihood that a patent, once granted, will be revoked or rendered unenforceable—distorts investment decisions and reduces the efficiency of industries that depend on intellectual property protections. Changes in the law that have this effect will undermine all patents, not just those that are successfully challenged. In particular, it is essential that any new post-grant review procedures strictly limit when and by whom challenges may be brought, as well as their subject matter. Without these protections, additional post-grant review procedures are likely to weaken property rights without significantly reducing litigation—their ostensible purpose.

  For similar reasons, the "inequitable conduct" doctrine—under which minor and sometimes accidental omissions from or misstatements in the application process can be punished with unenforceability of the entire patent and even related patents—should not be expanded, whether directly or indirectly by taking advantage of new requirements imposed on applicants. Indeed, as recommended by the National Academies of Science, the doctrine's great costs and limited deterrent value counsel its elimination or restriction.[7] At the least, initial determinations of inequitable conduct should be referred to the Patent Office for reexamination and, as appropriate, reissuance to reduce the burden of fully litigating the issue in court.[8]

- **Improve patent quality.** The key to preventing abuse of the patent system—and especially the abuses of "trolls" armed with broad and questionable patents—is to issue high-quality patents. Ensuring that examinations are done right and that examiners have the time and incentives to do thorough work will improve patent quality and make patents more valuable to true innovators.

  Improving quality will require increased resources for the Patent Office, changes in the incentives presented by the patent examiner production system, and steps to improve the experience and capabilities of the examiner corps. Each of these is discussed in turn below.

- **Provide adequate resources to the Patent and Trademark Office.** Even as the Patent Office's budget has increased nearly fourfold over the past decade, application pendency and the application backlog have also increased to record levels due to a surge in the number of applications, as well as their increased complexity.[9] The magnitude of these shortfalls proves that the Patent Office lacks adequate resources to do its job, let alone to do it well.

  As an initial matter, you should ask Congress for the permanent authority for the Patent Office to keep all of its fees. This alone would aid in rebuilding the Office and long-term budgeting and planning. In addition, you should explore seeking authority for the Office to retain

6. Nathan Myhrvold, *Inventors Have Rights, Too!* Wall St. J., March 30, 2006, *available at* http://online.wsj.com/article/SB114368437650611883.html.

7. Nat'l Research Council, A Patent System for the 21st Century 59 (Stephen A. Merrill, Richard C. Levin, & Mark B. Myers, eds., 2004), P. 121–23.

8. This is the approach taken by recent legislation introduced by Sen. Kyl. S. 3600, 110th Cong. § 11 (2008).

9. *See* U.S. Patent and Trademark Office, 2008 Annual Report, Table 1: Summary of Patent Examining Activities (FY 2004–FY 2008), at http://www.uspto.gov/web/offices/com/annual/2008/oai_05_wlt_01.html.

and invest excess revenues from year to year, which could also improve budgeting and planning.

The Patent Office also needs greater authority to set fees so that it can establish a fee structure based on the difficulty of applications and priorities. The fee structure should also be used as an incentive for applicants to streamline their applications and do more to increase the efficiency of the examination process, and it should strive to reduce cross-subsidies, requiring applicants to internalize the costs of their applications. In particular, the fee structure should take into account an application's priority, its number of claims, and other indicia of its complexity. This approach, coupled with strong congressional oversight to ensure that the fee-setting power is not abused, would create incentives for both the Office and applicants to improve patent quality. If Congress is unwilling to grant fee-setting authority, you should propose to Congress a fee schedule that embodies these elements.

- **Align the patent production system with priorities and needs.** The incentives faced by patent examiners are controlled by the production system, which sets the average amount of time they spend on applications and is used to evaluate their performance. At present, the system encourages examiners to spend too little time on most applications, to cut short the examination of complex applications disproportionately, and to shortchange initial examinations in favor of continuation applications.

  In general, changes should focus on improving initial patentability determinations and weighting time allowances and goals by the complexity of the technology area. Changing examiners' incentives in this way will allow more thorough examinations and, in the end, result in better quality patents.

- **Focus on personnel.** The fact that the corps of patent examiners has grown from approximately 1,500 in 1988 to nearly 6,000 today obscures the enormous rate of attrition that has undermined the Patent Office's capabilities. Indeed, the Office's current leadership has identified hiring and training new examiners as its chief challenge, as well as opportunity, in improving patent quality.[10]

  At the root of this problem are dissatisfaction with the production system and a career path that encourages attrition. Reforming the production system should serve to increase job satisfaction somewhat, but increasing the Office's performance will require much greater attention to professional development and training within the organization; available career tracks (particularly as concerns examiners who intend to study law); and compensation. Though the Office will never be able to prevent the attrition of those who leave primarily to earn more in the private sector, it can still make examination a more attractive career for many. Studying and then addressing these issues should be a priority.

- **Reduce backlogs and pendency.** In 2008, average pendency time for issuance of a patent reached 32.2 months, and the total backlog of applications exceeded 750,000.[11] Until the Patent Office is able to dig itself out from this avalanche of applications, it will be hard-pressed to devote resources to improving quality.

  While the greatest gains in improving both quality and efficiency over the long run will come from improving resources, shifting incentives for applicants and examiners, and improving the capabilities of examiners, a number of more minor reforms could contribute significantly to these goals. Among them: regular pre-search and pre–first action interviews with examiners to improve application quality and reduce amendments late in the examination process, as well as continuations; financial incentives, perhaps on a one-time basis, for applicants who elect to abandon or defer applications for inventions prior to commencement of search or examination; and greater information sharing

10. U.S. Patent and Trademark Office, 2008 Annual Report, "Strategic Goal 1: Optimize Patent Quality and Timeliness," at http://www.uspto.gov/web/offices/com/annual/2008/mda_02_02.html.

11. U.S. Patent and Trademark Office, 2008 Annual Report, Table 1: Summary of Patent Examining Activities (FY 2004–FY 2008), Table 3: Patent Applications Pending Prior to Allowance (FY 1998–FY 2008).

with foreign patent offices and greater reliance on their searches and examinations.

In addition, reducing backlogs and pendency will require looking critically at reform proposals that would assign new responsibilities to the Patent Office when it is already unable to carry out those it has today.

- **Reject proposals that would undermine investment in innovative biologic drugs.** Though not an issue with the patent system, the current debate over biologic pharmaceuticals (complex drugs produced through biological rather than mere chemical processes) raises identical issues concerning certainty of rights and incentives for investment and innovation. Current law lacks a pathway for regulatory approval of follow-on (i.e., generic) versions of biologics based on clinical data from the innovator product, and Congress has considered several proposals to create such a pathway while granting the innovator up to 14 years of "data exclusivity" (the same effective duration as for other kinds of drugs). Without such an exclusivity period, there is the real risk that generic manufacturers could design follow-on biologics that avoid innovator patents but are similar enough to share clinical data.

  Without adequate data exclusivity, innovation in the biotech sector will dry up, leading to fewer lifesaving treatments and eroding America's leadership in this field. Biologic development is driven by venture capital investment, and as it is, only 10 percent of biologics discovered reach the market. Most firms developing these drugs never achieve profitability. Imposing a short exclusivity period or otherwise limiting enforcement of biologic patents, as some in Congress favor, would reduce investment in the field, as well as innovation.

Conclusion

American businesses are among the world's most innovative and, as a result, stand as global leaders in a great many competitive fields, despite other countries' lower labor costs and other advantages. This is due not to chance but, in large measure, to the strong intellectual property protections that the Framers committed to the Constitution. The Framers recognized the importance of promoting science and the pragmatism of doing so with property—an "exclusive Right"—rather than a regulatory regime.[12] As James Madison explained, "The public good coincides in both cases [patent and copyright] with the claims of individuals."[13]

Your promise to pursue and support reforms that improve the timeliness and quality of patents is both pragmatic and consistent with the Framers' property-based approach. Predictability and clarity in patents will, as you observed, further innovation. In contrast, proposals that undermine these values will have the opposite effect. The key to achieving successful patent reform and avoiding unnecessary damage to America's economic leadership lies in discriminating carefully between the two.

12. U.S. Const., Art. I, § 8, cl. 8.
13. The Federalist No. 43 (James Madison).

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