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Acquiring Innovation

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Acquiring Innovation

Abstract

In recent years, the innovation market has witnessed a new business model involving companies that are mere patent holding shells and not operating entities. They have no customers or products to offer, but they do have an aggressive tactic of using patent portfolios to threaten other operating companies with potential infringement litigation. The strategy is executed with the end goal of extracting handsome settlements. Acquisitions of patents for offensive use have become a major concern to operating companies because such acquisitions pose the threats of patent injunction, interrupting the business and crippling further innovation. While many operating companies today know that innovation is the cornerstone of the technology and information based economy, not many companies today self-develop every segment of their end products or services. If a company cannot self-develop certain innovations, it can acquire the innovations. Purchases, transfers, and licenses of technology are common occurrences, which allow companies to achieve maximum results. Companies acquire innovations to supplement their research and development and ultimately strengthen their presence in the marketplace. Companies often turn to startups and young entities to acquire these supplemental innovations, generally in the form of promising intellectual property portfolios. As segmentation of the innovation market expands, acquiring innovations is part of many companies' strategic plan. For example, Intel acquired Oplus Technologies in early 2005 for Oplus's advanced video processing technology and then acquired Zarlink in late 2005 for its demodulation and tuner technologies. Intel used these combined technologies to complement Intel's core microprocessor technology, enhancing Intel's ability to control the consumer electronic market. Likewise, Boston Scientific acquired EndoTex Interventional Systems, Inc. for its NexStent Carotid Stent. This acquisition potentially provides Boston Scientific with the opportunity to incorporate the NexStent Carotid Stent into Boston Scientific's portfolio of available carotid artery products so it can expand its market. These examples beg the questions of how tax law currently treats innovation acquisition costs and whether that treatment stimulates further innovations vis-à-vis encouraging acquisitions of innovations to occur. As a widely accepted principle of taxation, any expenditure that produces a benefit lasting beyond the current tax period should be capitalized. Under current tax policy, the costs of innovation development are not subject to this general capitalization principle, but can be deducted when incurred. In contrast, the costs of innovation acquisitions are subject to normative capitalization, as well as a host of irrational tax depreciation rules that differ depending on method of innovation protection, manner of procurement, and even method of payment. This Article explores whether exceptions from asset-capitalization and rational tax depreciation rules are justified to reflect the realities of today's segmentation of the innovation market. The authors argue that the federal tax subsidy for innovation should not be limited to initial research, but should be expanded to cover desirable acquisitions in order to achieve optimal innovation outcomes and enhanced economic growth. This Article further explores accelerated tax incentives for innovations purchased for further development or licensing purposes. The addition of adequate economic incentives for select innovation acquisitions would reflect the realities of today's segmentation of innovation and serve to encourage a robust acquisition market. Part I focuses on innovation development and the marketplace, discussing the increasing segmentation of the innovation market where startups and universities fill a special niche for major corporations and industries by serving as the incubation centers for ideas. Different methods of acquiring innovations and the available legal protection for innovations are explained to illustrate the dynamics of the marketplace. Part II reveals that licensing of innovations post-development and acquisition serves as the new model of business, representing a paradigm shift in business models. Both defensive and offensive uses of innovation are developing as the new mode of practice today. Part III illustrates flaws with the current federal tax regime governing innovations, namely its focus solely on the development market and its resulting failure to adequately incentivize desirable acquisitions of innovation. Part IV explores

accelerated tax incentives for innovation acquisitions. One option explored is immediate expensing of limited innovation acquisition costs. Expensing would stimulate technological development, eliminate high administrative costs, and reduce harm caused by current irrational tax depreciation rules. Another option explored is an accelerated tax depreciation system for otherwise capitalized innovation acquisition costs. An accelerated depreciation system that takes into account retirement and revenue risks of innovation would serve to encourage desirable innovation acquisitions and reduce administrative costs for taxpayers and the government. So as not to negatively hinder innovation, both options are recommended for innovations acquired for further development or licensing purposes, but not for innovations acquired for offensive uses. The Article concludes that the proposed options would encourage acquisitions of innovation for societal good and achieve tax policy goals such as efficiency and administrability.

Keywords

Intellectual Property, Patents, Tax, Tax Policy, TI, IBM, Innovation, Technology, Patent Reform, License, Licensing

ARTICLE

ACQUIRING INNOVATION*

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INTRODUCTION

In recent years, the innovation market has witnessed a new business model involving companies that are mere patent holding shells and not operating entities. They have no customers or products to offer, but they do have an aggressive tactic of using patent portfolios to threaten other operating companies with potential infringement litigation.¹ The strategy is executed with the end goal of extracting handsome settlements.² Acquisitions of patents for offensive use have become a major concern to operating companies because such acquisitions pose the threats of patent injunction, interrupting the business and crippling further innovation.³

While many operating companies today know that innovation is the cornerstone of the technology and information based economy,⁴ not

1. See Joe Beyers, *Perspective: Rise of the Patent Trolls*, CNET NEWS.COM, Oct. 12, 2005, http://news.com.com/Rise+of+the+patent+trolls/2010-1071_3-5892996.html (noting that after the dot-com bust, “a new kind of business with a simple, yet potentially lethal, model has emerged,” where companies have no products or customers, but “wield the power to bring the companies that actually make and sell products to their knees”).

2. See generally Maggie Shiels, *Technology Industry Hits Out At ‘Patent Trolls,’* BBC NEWS, June 2, 2004, <http://news.bbc.co.uk/1/hi/business/3722509.stm> (reporting the extortion tactics employed by a patent holding company to extract settlement from various operating companies); *Underdog or Patent Troll?*, BUSINESS WEEK, Apr. 24, 2006, http://www.businessweek.com/magazine/content/06_17/b3981070.htm (noting that the patent holding companies’ business plan “consists of cashing in on this intellectual property by suing traditional corporations, the types that produce real products”).

3. Shiels, *supra* note 2 (quoting FTC Commissioner Mozelle Thompson’s statement about the negative effects of patent trolls: “But we have seen instances where companies use that monopoly in an anti-competitive way, sometimes to prevent other products from getting to market, to prevent people from sharing ideas and to prevent the kind of innovation that the patent system is really trying to spur on”).

4. See JULIE A. HEDLUND, THE INFORMATION TECHNOLOGY & INNOVATION FOUNDATION, PATENTS PENDING: PATENT REFORM FOR THE INNOVATION ECONOMY 1

many companies today self-develop every segment of their end products or services.⁵ If a company cannot self-develop certain innovations, it can acquire the innovations.⁶ Purchases, transfers, and licenses of technology are common occurrences, which allow companies to achieve maximum results. Companies acquire innovations to supplement their research and development and ultimately strengthen their presence in the marketplace.⁷ Companies often turn to startups and young entities to acquire these supplemental innovations, generally in the form of promising intellectual property portfolios.⁸

As segmentation of the innovation market expands, acquiring innovations is part of many companies' strategic plan. For example, Intel acquired Oplus Technologies in early 2005 for Oplus's advanced video processing technology and then acquired Zarlink in late 2005 for its demodulation and tuner technologies.⁹ Intel used these combined technologies to complement Intel's core microprocessor technology, enhancing Intel's ability to control the consumer electronic market.¹⁰ Likewise, Boston Scientific acquired

(2007), <http://www.itif.org/files/PatentsPending.pdf> (“[T]he U.S. patent system provides key economic incentives that spur innovation by giving patent owners a temporary property right to their inventions while at the same time requiring them to disclose their patents to the public.”).

5. See Stephen Shankland, *Sun Balances Acquisition, Innovation*, CNET NEWS.COM, Feb. 26, 2003, <http://news.com.com/2100-1001-986194.html> (reporting that even companies like Sun, known to be an innovator, now look to outsiders for innovations to make its products in order to stay competitive, and noting that Sun's archival Microsoft has been known to expand its technology portfolios through acquisitions).

6. See Microsoft, Press Pass, Q&A: Navision Executives See Global Solutions, Innovation Stemming from Acquisition by Microsoft, July 11, 2002, <http://www.microsoft.com/presspass/features/2002/jul02/07-11navisionqa.msp> (reporting that Microsoft acquired Navision for \$1.45 billion for its innovation and that the two software companies “join[ed] forces to further the vision of an interconnected marketplace for small- and medium-sized businesses”); Knowledge@Wharton, *Does Innovation Through Acquisition Work?*, FORBES.COM, Nov. 8, 2005, http://www.forbes.com/entrepreneurs/2005/11/08/microsoft-nortel-acquisitions-cx_1108wharton.html [hereinafter Knowledge@Wharton] (reporting that companies spent \$3.5 trillion on acquisition between 1992 and 2000 and that acquirer companies face “challenges at the product, organization and market levels”).

7. See Knowledge@Wharton, *supra* note 6 (commenting that companies that buy other companies rooted in different technology can gain “new technological functionalities and capabilities” if the purchasing companies can successfully integrate the acquired innovations with their existing innovations).

8. See *id.* (stating that top companies acquired smaller firms with budding, though untested, technology to keep up with technological advancements).

9. See Press Release, Intel, Intel Announces Agreement to Acquire Digital Broadcast Technology Assets, Expertise From Zarlink Semiconductor (Oct. 7, 2005), <http://www.intel.com/pressroom/archive/releases/20051007corp.htm>.

10. See *id.* (noting that Intel's acquisition of Oplus and Zarlink technologies provide Intel with a greater opportunity to “deliver innovative platform solutions”).

EndoTex Interventional Systems, Inc. for its NexStent Carotid Stent.¹¹ This acquisition potentially provides Boston Scientific with the opportunity to incorporate the NexStent Carotid Stent into Boston Scientific's portfolio of available carotid artery products so it can expand its market.¹² These examples beg the questions of how tax law currently treats innovation acquisition costs and whether that treatment stimulates further innovations vis-à-vis encouraging acquisitions of innovations to occur.

As a widely accepted principle of taxation, any expenditure that produces a benefit lasting beyond the current tax period should be capitalized.¹³ Under current tax policy, the costs of innovation development are not subject to this general capitalization principle, but can be deducted when incurred.¹⁴ In contrast, the costs of innovation acquisitions are subject to normative capitalization, as well as a host of irrational tax depreciation rules that differ depending on method of innovation protection, manner of procurement, and even method of payment.¹⁵

This Article explores whether exceptions from asset-capitalization and rational tax depreciation rules are justified to reflect the realities of today's segmentation of the innovation market. The authors argue that the federal tax subsidy for innovation should not be limited to initial research, but should be expanded to cover desirable acquisitions in order to achieve optimal innovation outcomes and enhanced economic growth. This Article further explores accelerated tax incentives for innovations purchased for further development or licensing purposes. The addition of adequate

11. See Press Release, Boston Scientific, Boston Scientific Acquires EndoTex Interventional Systems, Inc. (Jan. 4, 2007), <http://bostonscientific.mediaroom.com/index.php?s=43&item=604> (announcing its acquisition of EndoTex Interventional Systems, Inc., a privately held development stage medical device company focused on a less-invasive solution to treating carotid artery disease).

12. *Id.*

13. See generally Ethan Yale, *When are Capitalization Exceptions Justified?*, 57 TAX L. REV. 549 (2004) (discussing when exceptions to the requirement that expenditures producing long-lasting benefits should be capitalized are justified).

14. See *infra* notes 102–105, 114–121 and accompanying text (describing the current treatment of innovation development costs). Section 174 of the Internal Revenue Code (“Code”) permits a taxpayer to deduct immediately research or experimental expenditures that would otherwise have to be capitalized under § 263. See I.R.C. § 174(a); see also § 263(a)(1)(B) (providing that the capitalization rules under § 263(a) do not apply to research or experimental expenditures deductible under § 174(a)). See generally JEFFREY A. MAINE & XUAN-THAO N. NGUYEN, INTELLECTUAL PROPERTY TAXATION: TRANSACTION AND LITIGATION ISSUES 132–56 (BNA 2003) (explaining § 174 in depth). Unless otherwise noted, all references to the Internal Revenue Code are to the Internal Revenue Code of 1986, as amended.

15. See *infra* notes 129–176 and accompanying text (detailing the current treatment of innovation acquisition costs).

economic incentives for select innovation acquisitions would reflect the realities of today's segmentation of innovation and serve to encourage a robust acquisition market.

Part I focuses on innovation development and the marketplace, discussing the increasing segmentation of the innovation market where startups and universities fill a special niche for major corporations and industries by serving as the incubation centers for ideas. Different methods of acquiring innovations and the available legal protection for innovations are explained to illustrate the dynamics of the marketplace.

Part II reveals that licensing of innovations post-development and acquisition serves as the new model of business, representing a paradigm shift in business models. Both defensive and offensive uses of innovation are developing as the new mode of practice today.

Part III illustrates flaws with the current federal tax regime governing innovations, namely its focus solely on the development market and its resulting failure to adequately incentivize desirable acquisitions of innovation.

Part IV explores accelerated tax incentives for innovation acquisitions. One option explored is immediate expensing of limited innovation acquisition costs. Expensing would stimulate technological development, eliminate high administrative costs, and reduce harm caused by current irrational tax depreciation rules. Another option explored is an accelerated tax depreciation system for otherwise capitalized innovation acquisition costs. An accelerated depreciation system that takes into account retirement and revenue risks of innovation would serve to encourage desirable innovation acquisitions and reduce administrative costs for taxpayers and the government. So as not to negatively hinder innovation, both options are recommended for innovations acquired for further development or licensing purposes, but not for innovations acquired for offensive uses. The Article concludes that the proposed options would encourage acquisitions of innovation for societal good and achieve tax policy goals such as efficiency and administrability.

I. INNOVATION DEVELOPMENT AND THE MARKETPLACE

If a company cannot self-develop certain innovations, it looks to others to acquire the innovations. Reasons for not developing the innovations in-house may include cost, expertise, facility restrictions,

and personnel concerns.¹⁶ Generally, companies acquire innovation for purposes of further development and production of products and services with the desire to expand or capture additional market shares.¹⁷

A company desiring to acquire innovations developed by outsiders can attempt to purchase innovative portfolios comprised of trade secrets, software, patent applications, and patents.¹⁸ The company may choose to purchase only the innovations, without the attached ongoing business concern, if there is a willing seller.¹⁹ By conducting an asset purchase alone, the company avoids the acquisition of the target company's ongoing concerns and liabilities. Alternatively, the company may conduct a stock purchase by acquiring startup entities that are developing innovative technologies.²⁰ Great innovations are also developed by established entities, thus, the company can acquire the innovations by acquiring the established corporation.²¹

16. See Jonathan Thaw, *Writely Puts Google in Word-Processing Business*, SEATTLE POST-INTELLIGENCER, Mar. 10, 2006, http://seattlepi.nwsourc.com/business/262443_googlewritely10.html (reporting Google's recent acquisition of a Silicon Valley upstart company, Upstartle, for its "Writely Internet word-processing software and a new weapon in its battle with Microsoft Corp").

17. See, e.g., Ben Elgin, *Google Buys Android for Its Mobile Arsenal*, BUSINESS WEEK, Aug. 17, 2005, http://www.businessweek.com/technology/content/aug2005/tc20050817_0949_tc024.htm (stating that Google acquired the twenty-two month-old startup for its technology in "developing smarter mobile devices that are more aware of its owner's location and preferences"); *Microsoft Buys Motionbridge*, REDHERRING, Feb. 13, 2006, <http://www.redherring.com/Home/15713> (reporting the acquisition by Microsoft of Motionbridge in early 2006 for "its wireless search capabilities" to add "to the Redmond software giant as it attempts to broaden the range of services it can deliver over the Internet and over wireless connections as well," and to give Microsoft access to MotionBridge's ninety million subscribers).

18. See *Microsoft Buys Motionbridge*, *supra* note 17 (reporting that MotionBridge has several patent applications in its technology portfolio).

19. See *Technology Briefing/E-commerce: Broadcom Buys Patents from Unova*, N.Y. TIMES, Dec. 27, 2002, at C3 (reporting that Broadcom, the biggest maker of semiconductors used in cable modems, bought about 150 patents and patent applications from Unova for \$24 million in cash on December 26, 2002); *ADM Buys Patents to Boost Cholesterol Lowering*, NUTRAINGREDIENTS-USA.COM, July 16, 2005, <http://www.nutraingredients-usa.com/news-by-product/news.asp?id=61430&idCat=89&k=ADM-patent-soy> (reporting that ADM acquired "the intellectual property from rival Solae, adding them to the package of patents on soy isoflavones that it acquired from the firm earlier this year").

20. See, e.g., David Shook, *Rosetta Inpharmatics: Translating Genes Into Profits*, BUSINESS WEEK, June 21, 2001, http://www.businessweek.com/bwdaily/dnflash/jun2001/nf20010621_887.htm (analyzing Merck's acquisition of Rosetta, a startup pioneer company in genomics); Uclia Wang, *TI to Buy Chipcon for \$200M*, REDHERRING, Dec. 20, 2005, <http://www.redherring.com/Home/14980> (reporting Texas Instruments' purchase of Chipcon, a Norwegian company, for \$200 million to "boost TI's expertise in designing short-range wireless chips for consumer electronics and security systems").

21. See, e.g., Press Release, IBM, *IBM Acquires DataPower* (Oct. 18, 2005), <http://www-03.ibm.com/press/us/en/pressrelease/7934.wss> (announcing IBM's purchase of DataPower, a leading provider of SOA appliance products, to enable

A. Innovations and Protections

Holders of innovations generally seek protection for their innovations.²² The incentive-based legal protection for innovations grants the holders the right to exclude others from using and practicing the innovations as long as the innovations meet certain legal requirements.

Patent and trade secret laws extend protection to innovations.²³ Under patent law, the innovation is entitled to patent protection if the innovation satisfies patentability requirements such as patentable subject matter, utility, novelty, nonobviousness, and enablement.²⁴ The patentee enjoys the patent monopoly for a term of twenty years from the date on which the patent application was filed.²⁵ In exchange for the monopoly, the innovation is fully disclosed to the public.²⁶ The holder of the innovation, in some instances, may not wish to disclose the innovation and prefers to maintain the secrecy of the innovation by implementing various safeguarding procedures while using the innovation during the operation of the company or

integration and help provide security at the Web services message level, and to “improve the performance, security and management of business processes built of reusable, open-standards-based software components, which operate independently from the applications and computing platforms on which they run”); Press Release, Intel, Intel Acquires Sarvega to Bolster Software, Enterprise Platform Strategies (Aug. 17, 2005), <http://www.intel.com/pressroom/archive/releases/20050817corp.htm> (announcing that Intel acquired Sarvega, Inc., a leader in XML solutions, for the purpose of combining “Intel’s proven hardware capabilities with Sarvega’s underlying XML software technology and engineering expertise”).

22. See generally Eric E. Johnson, *Calibrating Patent Lifetime*, 22 SANTA CLARA COMPUTER & HIGH TECH. L.J. 269, 270 (2006) (commenting that patents are “flagship vehicles” for protecting innovation and providing innovation and financial incentives). Startup companies in particular frequently seek to obtain patent protection for their innovations and sue industry giants for patent infringement. See Matthew Fordahl, *Mobil E-mail Startup Sues Microsoft*, USA TODAY, Dec. 15, 2005, http://www.usatoday.com/tech/news/techpolicy/business/2005-12-15-microsoft-visto-suit_x.htm (reporting that a mobile e-mail startup, Visto Corp., sued Microsoft for allegedly infringing on three of its patents “related to how information is handled between servers and handheld devices such as cellular phones”).

23. See Julie Manning Magid, Anthony D. Cox & Dena S. Cox, *Qualifying Brand Image: Empirical Evidence of Trademark Dilution*, 43 AM. BUS. L.J. 1, 7 (2006) (asserting that high-tech companies preserve their competitive advantage by seeking patent protection for their innovations).

24. See 35 U.S.C. §§ 101–103, 112 (2000); see also Oren Bar-Gill & Gideon Parchomovsky, *A Market for Ideas?*, 84 TEX. L. REV. 395, 426–27 (2005) (positing that in addition to the requirements of novelty, utility and nonobviousness, a new requirement of developability should be considered in screening which ideas are worthy of patent protection).

25. 35 U.S.C. § 154(a) (2) (2000).

26. See Timothy R. Holbrook, *Possession in Patent Law*, 59 SMU L. REV. 123, 150–51 (2006) (arguing that the disclosure obligation is concerned more with the inventor’s actual scope of invention and the right to exclude).

the manufacturing of products based on the innovation.²⁷ In the latter scenario, the holder of the innovation looks to trade secret law for protection.

Under trade secret law, the holder enjoys trade secret protection for the innovation, as long as the innovation is kept secret.²⁸ The term of protection lasts as long as the secrecy is maintained.²⁹ Many innovations fail to meet the patentability requirements, but satisfy the trade secret law requirements and, hence, are entitled to trade secret protection.³⁰ In those cases, the holder of innovation will not seek patent protection, but instead rely on trade secret law for the protection of the innovation.³¹ Still, it is common that the holder of innovations seeks both patent and trade secret protection for its innovations.³²

Holders of innovations in software also appeal to copyright law for protection, in addition to trade secret and patent laws.³³ Though the scope of copyright protection for software has been narrowed by the courts in recent years,³⁴ holders continue to assert copyright

27. See Katherine J. Strandburg, *What Does the Public Get? Experimental Use and the Patent Bargain*, 2004 WIS. L. REV. 81, 105–06, 108–13 (2004) (explaining the “incentive to invent” and “incentive to disclose” theories of patents and concluding that trade secret protection, rather than patent, sufficiently encourages primary invention for non-self disclosing inventions when the expected trade secret return is greater than the “extra income needed to recoup the appropriate investment in developing and commercializing the invention”).

28. See Johnson, *supra* note 22, at 275–76 (comparing legal protection for innovations under the trade secrets regime to the patent regime).

29. See *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 475 (1974) (noting that a trade secret must not be of public knowledge or of general knowledge in the trade or business, and does not lose secrecy when the holder reveals it to another despite having an obligation not to disclose).

30. See *id.* at 488–89 (explaining trade secret protection for non-patentable inventions).

31. See Johnson, *supra* note 22, at 281 (commenting that trade secret protection provides incentives, in terms of scope of subject matter and cost, for many innovations that do not meet the requirements for a patent).

32. See Robert G. Bone, *A New Look at Trade Secret Law: Doctrine in Search of Justification*, 86 CAL. L. REV. 241, 264–65 (1998) (referencing an argument made by other scholars that trade secret law provides “a useful supplement to patent law because it allows inventors to internalize more of the social benefit of their inventions”).

33. See generally Bradford L. Smith & Susan O. Mann, *Innovation and Intellectual Property Protection in the Software Industry: An Emerging Role for Patents?*, 71 U. CHI. L. REV. 241 (2004) (explaining that the development of intellectual property protection regimes for software has moved from trade secrets to copyrights then to patents).

34. See Lateef Mtima, *Protecting Non-Literal Elements of Computer Programs: Comparing the Approaches of Whelan and Altai*, SC71 ALI-ABA 133 (1998) (analyzing *Whelan Assoc. v. Jaslow Dental Laboratory*, 797 F.2d 1222 (3d Cir. 1986), and *Computer Assoc. Intl, Inc. v. Altai, Inc.*, 126 F.3d 365 (2d Cir. 1997), two seminal cases on copyright protection for computer programs, and explaining how the Second Circuit in *Altai* considers the “purpose equals idea” equation developed by the *Whelan* court overbroad).

protection for software innovations.³⁵ If the software is qualified for copyright protection, the date of protection begins on the date the software is created.³⁶ There is no need to register copyrightable software with the U.S. Copyright Office in order to receive copyright protection.³⁷ In addition, both criminal and civil copyright infringement actions are available against defendants for wholesale copying and distribution of copyrighted software without authorization.³⁸ The duration for copyright protection is quite long—the life of the author of the copyright software plus seventy years.³⁹ If the software is a work for hire, the duration is ninety-five years from the year of publication or 125 years from the year of creation, whichever expires first.⁴⁰

Taking advantage of the incentive-based legal protections for innovations, holders can create and maintain attractive portfolios of intellectual property assets. The quality and quantity of the portfolios will impress outsiders including competitors, investors, and acquirers.⁴¹

35. See, e.g., *Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240, 1254 (3d Cir. 1983) (opining that courts usually find the requisite irreparable harm for a preliminary injunction in copyright infringement actions if the defendant engages in software piracy by making wholesale copies of the software without authorization). Developers of software make their decision among the competing legal regimes for protection of software. They may rely on copyright protection that exposes the secrecy of their creativity, or they may maintain the secrecy of the innovation and forgo mass marketing and appeal to trade secret law for protection. See generally James Gibson, *Once and Future Copyright*, 81 NOTRE DAME L. REV. 167, 177–78, 211–12 (2005).

36. Gibson, *supra* note 35, at 225.

37. See Judith A. Szepesi, *Maximizing Protection for Computer Software*, 12 SANTA CLARA COMPUTER & HIGH TECH. L.J. 173, 188 (1996) (stating that registration is not required for receiving copyright protection, but is a prerequisite for filing suit in federal court).

38. See, e.g., *United States v. Vampire Nation*, 451 F.3d 189 (3d Cir. 2006); *Wall Data Inc. v. Los Angeles County Sheriff's Dep't.*, 447 F.3d 769 (9th Cir. 2006); see also 17 U.S.C. § 506 (2000) (mandating criminal punishment for violations of a copyright for any person who willfully infringes a copyright “for purposes of commercial advantage or private financial gain” and “by the reproduction or distribution, including by electronic means, during any 180-day period, of 1 or more copies or phonorecords of 1 or more copyrighted works, which have a total retail value of more than \$1,000”).

39. See 17 U.S.C. § 302(a) (2000) (“Copyright in a work created on or after January 1, 1978, subsists from its creation and, except as provided by the following subsections, endures for a term consisting of the life of the author and 70 years after the author’s death.”).

40. See *id.* § 302(c) (“In the case of . . . a work made for hire, the copyright endures for a term of 95 years from the year of its first publication, or a term of 120 years from the year of its creation, whichever expires first.”).

41. See Holbrook, *supra* note 26, at 149 (providing a succinct summary of patent signaling theory).

The patent is to act as a signal to the market, not to technologists. What the market wants to know is whether the firm has something of value or is

B. Startup Acquisition

Acquiring new innovations can be accomplished through the acquisition of the startup company that holds the innovations. Most large corporations cannot develop all innovations that contribute to commercially ready products and services.⁴² Innovations often occur at small companies and universities. As the innovation market becomes increasingly segmented, startups and small companies emerge to fill the “gaps” of innovation for big companies and one another.⁴³

The value of a startup company is often dependent on its patent portfolios.⁴⁴ Many startups are the direct result of the Bayh-Dole Act, enacted in the 1980s, which permits universities to obtain patents for the innovations.⁴⁵ Even though universities receive funding from the government for a wide range of their research activities, such funding does not prohibit universities from becoming patent holders.⁴⁶ As inventors, university researchers work with various industries and

innovative. At the root, then, of signaling theory is an attempt by the firm to disclose what it possesses through low cost mechanisms so that investors will commit financial resources. The patent may also signal the direction the firm intends to follow, but the signal's audience is actually concerned with the patent's potential reward in terms of return rather than with that disclosure's technical details. The market wants to know what the firm possesses; it does not want to learn from or improve upon what the firm has created. The use of an enabling disclosure to demonstrate possession is thus entirely consistent with and supportive of signaling theory.

Id.

42. See Gideon Parchomovsky & R. Polk Wagner, *Patent Portfolios*, 154 U. PA. L. REV. 1, 2 (2005) (asserting that larger companies seek to compile related patents into a “patent portfolio” that will increase the “scale and diversity of available marketplace protections for innovations”).

43. *Id.* at 10.

44. See Richard S. Gruner, *Corporate Patents: Optimizing Organizational Responses to Innovation Opportunities and Invention Discoveries*, 10 MARQ. INTELL. PROP. L. REV. 1, 11 (2006) (asserting that startup companies need patents to draw in potential investors who have many investment alternatives and prefer the risk containment that patents offer); cf. Ronald J. Mann, *Do Patents Facilitate Financing in the Software Industry?*, 83 TEX. L. REV. 961, 963–64 (2005) (answering in the negative that patents alone do not help small firms, particularly in the pre-revenue stage).

45. See Linda J. Demaine & Aaron Xavier Fellmeth, *Reinventing the Double Helix: A Novel and Nonobvious Reconceptualization of the Biotechnology Patent*, 55 STAN. L. REV. 303, 431–32 (2002) (quoting Leon Rosenburg, former Dean of Yale University School of Medicine, who stated that, since the 1980s, biotechnology has “moved us, literally or figuratively, from the class room to the board room and from the New England Journal [of Medicine] to the Wall Street Journal”). The escalating growth of patent procurements by universities is the direct result of their partnership with industry. Prominent university researchers are now working with or consulting for private companies. *Id.* at 432–33.

46. See *id.* at 433 (arguing that “[w]hen an academic researcher publicly reveals a new discovery, not only does the public benefit from the increase in general knowledge, but something else important happens. The university has precluded any commercial enterprise from patenting and, thus, monopolizing the discovery”).

startups that often receive the exclusive license to the patents owned by universities. Prior to the Act, universities could not seek ownership of patents in their names. Consequently, universities were handicapped in their efforts to engage in the licensing of innovations and joint collaborative efforts with private industries.⁴⁷

University researchers today often devote their expertise to work with startup companies to rapidly transform innovations to products and services for commercial exploitation.⁴⁸ Numerous examples illustrate such transformations.⁴⁹ For instance, two Stanford students worked on a project funded by the National Science Foundation (“NSF”) on digital libraries and then used the innovation to create the Google search engine company.⁵⁰ Another example is how Netscape began; the software package was written by a research student at the University of Illinois, with funding from NSF.⁵¹

C. *The Innovations Only Acquisition*

A company seeking to purchase only technology developed by others can acquire the intellectual property rights directly from the holders.⁵² By purchasing only the innovations, the acquiring

47. See Nusrat Khaleeli & Dennis Fernandez, *Patent Prosecution in Pharmacogenomics*, 88 J. PAT. & TRADEMARK OFF. SOC'Y 83, 84 (2006) (explaining that the Bayh-Dole Act permits the government to transfer ownership of many government funded inventions to universities, which has resulted in the licensing of half of the university-born patents).

48. See Margo A. Bagley, *Academic Discourse and Proprietary Rights: Putting Patents in Their Proper Place*, 47 B.C. L. REV. 217, 228–29 (2006) (noting the changing role of university faculty as inventors for startup companies).

49. See Shira Boss-Bicak, *Moving Ideas Off Campus: Research Projects Graduate From University to Marketplace*, N.Y. TIMES, Oct. 28, 2004, at C6 (reporting that universities have reaped nearly doubled revenue between 1997 and 2002—from \$699 million in 1997 to \$1.3 billion in 2002—and sought patents for their inventions, resulting in over 3,600 patents awarded in 2002).

50. See *Next Generation Internet in the President's Fiscal Year 2001 Budget: Hearing on S. 2046 Before the S. Subcomm. on Science, Technology, and Space*, 106th Cong. 60 (2000) (statement of Neal Lane, Assistant to the President for Science and Technology, and Director, Office of Science & Technology Policy).

Much of the research funded by Federal agencies is implemented by researchers at universities and in the commercial sector. . . . In numerous cases, university researchers transfer their experience to startup companies to rapidly make new capabilities available to the commercial sector. There are many success stories for this model of technology transfer. . . . More recently, the Google search engine company was started by two Stanford students who took the results of NSF-funded research on digital libraries and built a commercial service using these ideas.

Id.

51. See *id.*; Michael J. Kennedy, *Technology and Emerging Growth Acquisitions: The Private Perspective*, 1255 P.L.I./CORP 921 (2001) (explaining and providing examples of startups with university researchers).

52. See John Borland, *Acacia Purchase Creates Net Patent Powerhouse*, CNET NEWS.COM, Dec. 16, 2004, http://www.news.com/2100-1030_3-5494119.html

company can avoid the selling company's ongoing concerns and liabilities.⁵³

Alternatively, the acquiring company can purchase the innovations by acquiring the portfolios of intellectual property from distressed entities, which results in competitive pricing.⁵⁴ Very few start-up companies in the technology sector survive.⁵⁵ Many encounter financial hardship, and their assets, often intangible property, become available for potential purchasers to acquire.⁵⁶ For example, Commerce One once held many important Internet patents concerning methods for communication over the Internet and providing certain types of information when carrying out machine-to-machine transactions over the Internet.⁵⁷ When the company

(discussing Acacia's acquisitions of patent portfolios to further its goal of becoming the leading technology licensing company); Press Release, Broadcom, Broadcom Acquires Patent Portfolio From Cirrus Logic (Feb. 11, 2004), <http://www.broadcom.com/press/release.php?id=494286> (announcing Broadcom's purchase of a patent portfolio from Cirrus Logic for \$18 million); Lisa Wang, *AU Optronics Buys Patents from IBM*, *TAIPEI TIMES*, July 1, 2005, at 10, available at <http://www.taipetimes.com/News/biz/archives/2005/07/01/2003261773> (reporting that AU Optronics purchased about 170 U.S. patents dealing with liquid-crystal display technology from IBM Corp.).

53. See FRED M. GREGURAS & DAVID BARRY, *ACQUIRING INTELLECTUAL PROPERTY AND OTHER ASSETS OUT OF A DISTRESSED COMPANY I*, http://www.fenwick.com/docstore/Publications/Corporate/Acquiring_IP_and_Other_Asse.pdf (comparing different ways of acquiring intellectual property assets from distressed companies and noting the purchasing of assets as the "safest" where the distressed entity "transfers its assets to a third party in trust to pay the proceeds of sale to the seller's creditors").

54. See Tomas Kellner, *Perot Backs \$200 Million Bet on Patents* (2005), *FORBES.COM*, Aug. 9, 2005, http://www.forbes.com/home/services/2005/08/09/perot-patents-fund-cz_tk_0809patents.html (stating that Ross Perot's new private equity fund was set to purchase undervalued patent portfolios from companies in the areas of semiconductor, biotech, nanotechnology and software); Jason Schultz, *When Dot-Com Patents Go Bad*, *SALON.COM*, Dec. 13, 2004, http://www.salon.com/tech/feature/2004/12/13/patent_reform/ (discussing the practice of patent purchase from distressed companies for future offensive moves using patent weaponry against others).

55. See Stephen A. Gould, *Distressed-Asset Sales Afford Significant Growth Opportunities*, *BOSTON BUS. J.*, June 20, 2003, <http://boston.bizjournals.com/boston/stories/2003/06/23/focus2.html> (noting that corporate bankruptcy filings are at a high level).

56. See *id.* (identifying different types of intellectual property assets available for piecemeal purchases from distressed companies); Mark Ingram, *Guarding Ideas or Just Patent Blackmail?*, *THE GLOBE AND MAIL* (Toronto), Feb. 6, 2005, at B14, available at <http://www.theglobeandmail.com/servlet/story/RTGAM.20050602.wxtwtroll02/BNStory> ("Struggling companies with valuable patents have become acquisition targets, as has the intellectual property of failed tech firms."); Daryl Martin & David Drews, *The Secured Lender (Part I of II)*, *IPFRONTLINE.COM*, Jan. 21, 2006, <http://www.ipfrontline.com/depts/article.asp?id=8797&deptid=3> (comparing valuation criteria for intellectual property assets in distressed companies and non-distressed companies).

57. See Stephen Lawson, *Industry Group Might Buy Commerce One Patents*, *THE INDUSTRY STANDARD*, Nov. 25, 2004, <http://www.thestandard.com/internetnews/000659.php> (indicating that CommerceNet industry met to discuss the purchase of patents from the bankrupt entity, Commerce One).

declared bankruptcy, the patents became the property of the bankruptcy estate, and were subsequently sold to a third party purchaser.⁵⁸

II. A PARADIGM SHIFT IN ACQUISITION OF INNOVATIONS

In the last twenty years there has been a major change in the use of patents in business strategy.⁵⁹ Intellectual property assets are acquired for licensing purposes, and not merely for manufacturing. Intellectual property assets are also acquired for offensive use purposes.

A. *The Licensing Model*

Once upon a time, companies developed and acquired technologies mainly for purposes of either directly or indirectly using them in the operation of corporate entities or in the development of end products and services for distribution in the marketplace.⁶⁰ Today, some companies generate more revenue from the licensing of patents to others than from the manufacturing and distribution of innovations-based products in the marketplace.⁶¹

A classic example is Texas Instruments Corporation (“TI”). TI has amassed billions of dollars in patent royalties, reaping generous monetary benefits from its patents.⁶² TI discovered this new patent business model after it employed a patent infringement campaign against a number of Japanese companies for using computer chips

58. See John Markoff, *Novell Discloses It Bought E-commerce Patents*, INT’L HERALD TRIB., May 3, 2005, at Finance 16, available at <http://www.iht.com/articles/2005/05/02/business/novell.php> (stating that there is a growing secondary market for intellectual property acquired by companies that are not the original inventors or holders).

59. See Gruner, *supra* note 44, at 12 (emphasizing that corporations concentrate on patent ownership to “attract the investment needed for commercialization of high-tech products”).

60. See STEPHEN C. GLAZIER, PATENT STRATEGIES FOR BUSINESS 222 (3d ed. 1997) (detailing how Texas Instruments’ business model changed from manufacturing of electronic products to licensing intellectual property after the company aggressively litigated against infringers).

61. See, e.g., Borland, *supra* note 52 (reporting that Acacia’s intellectual property division produces no products and runs no services, but threatens others into taking a license from Acacia, and observing that Intellectual Ventures has pursued a similar strategy).

62. See Mike Hatcher, *Rising Patent Awards Hint at Future Increase in Litigation*, IPFRONTLINE.COM, July 13, 2005, <http://www.ipfrontline.com/depts/article.asp?id=4830&deptid=3> (indicating that in the mid-1980s TI began an aggressive licensing program that has led to billions of dollars in profits for TI).

based on TI patents.⁶³ TI has acquired numerous companies with technologies that complement and strengthen TI's portfolio for its licensing program.⁶⁴ For example, TI acquired Dot Wireless, a privately held company in the business of developing and marketing 3G wireless CDMA technologies, software, and transceiver reference designs.⁶⁵ This acquisition has enabled TI to offer an expanded selection of programmable DSP and analog-enabled wireless solutions in all 2.5G and 3G wireless standards and markets.⁶⁶ TI also purchased Chipcon, a company that designs short-range, low-power wireless RF (radio frequency) transceiver devices.⁶⁷ TI claimed that Chipcon's technologies would complement TI's existing products and strengthen TI's high-performance analog portfolio.⁶⁸ In addition to the acquisition of young companies, TI has purchased established companies such as chipmaker Burr-Brown, formerly known for its highly regarded A/D and D/A converter chips.⁶⁹ The acquisition of Burr-Brown was thought to strengthen TI's position in the data converter and amplifier segments of the analog semiconductor market.⁷⁰

TI is not an isolated example of the licensing business model. In the 1990s, IBM embraced the patents-based profit business model by licensing its patents.⁷¹ IBM aggressively sought patent protections for

63. See Andrew Pollack, *Japanese Fight Back as U.S. Companies Press Patent Claims*, N.Y. TIMES, Sept. 5, 1992, at 1 (noting that TI received \$256 million in royalties in 1991, mostly from Japanese companies).

64. See, e.g., Press Release, Texas Instruments, Texas Instruments Announces Agreement to Acquire ATL Research A/S: Purchase Enhances RF Expertise for Next Generation Wireless Products (June 15, 1999), <http://www.ti.com/corp/docs/press/company/1999/c99029.shtml>; Press Release, Texas Instruments, TI to Acquire Amati Communications for \$395 Million: Move Strengthens TI Position in Emerging \$6 Billion Market (Nov. 19, 1997), <http://www.ti.com/corp/docs/press/company/1997/c97087.shtml>.

65. See *Texas Instruments Makes Another Acquisition*, N.Y. TIMES, June 30, 2000, at C3 (announcing the TI acquisition).

66. Press Release, Texas Instruments, TI Acquires Dot Wireless, a Leader in CDMA Wireless Technology: Strength in IS-2000 Enables TI to Deliver Wireless Solutions for All 3G Standards (June 29, 2000), <http://www.ti.com/corp/docs/press/company/2000/c00039.shtml>.

67. See Press Release, National Electrical Manufacturers Association, Texas Instruments to Acquire Chipcon (Dec. 22, 2005), <http://www.nema.org/media/ind/20051222b.cfm>.

68. See *id.* (relaying TI Senior Vice President Gregg Lowe's assessment of TI's purchase).

69. Press Release, Texas Instruments, Texas Instruments to Acquire Burr-Brown: TI to Become a Leading Supplier of High-Performance Data Converters: Expanded Analog Portfolio Accelerates DSP-Attach Strategy (June 21, 2000), <http://www.ti.com/corp/docs/press/company/2000/c00030.shtml>.

70. See *id.* (elaborating on Burr-Brown's expertise in the field of data converters).

71. See Brad Stone, *Nickels, Dimes, Billions: Big Tech Companies are Raking in Big Bucks—A Little at a Time—By Charging for Use of Their Innovations*, NEWSWEEK, Aug. 2,

its innovations by applying for and obtaining tens of thousands of patents.⁷² For more than ten years, IBM held the most patents issued annually by the U.S. Patent Office.⁷³ The procured patents were for both IBM's products and its licensing program.⁷⁴ The licensing program established IBM as the veritable poster child of the licensing model, as the licensing revenue led to two billion dollars of pure profit for the company.⁷⁵ IBM is currently the fifteenth largest U.S. company and the forty-second largest company globally.⁷⁶

IBM does not develop all of its technology for its licensing products. IBM has aggressively acquired many companies for their technologies in order to integrate those technologies with IBM's existing portfolios in a strategy to maintain IBM's competitive dominance.⁷⁷ For example, IBM acquired Softek, a privately held company known for its data mobility technology, notably its patented Transparent Data Migration Facility solution, which changes information technology infrastructure to create a simple, unified approach to improving data movement and management across storage vendor platforms and operating system environments.⁷⁸ With Softek technology, IBM's clients can improve mobility of data while keeping that data online and making applications available to end-

2004, <http://newsweek.com/id/54559> (discussing how IBM and other companies realize greater profits when they protect and license their patents).

72. *Id.*

73. *Id.*

74. *Id.*

75. Stone noted that:

IBM set the standard for patent licensing in the early '90s. While Big Blue was in a steep decline, veteran employee and lawyer Marshall Phelps got the company to raise the fees it charged others for piggybacking on its ubiquitous technology. Phelps recalls that incoming CEO Lou Gerstner was skeptical of the program; at RJR Nabisco, he had been involved in a patent dispute with Procter & Gamble over soft chocolate-chip cookies. Phelps changed Gerstner's mind by cracking open an IBM PC and showing him all the components that came from other companies. In other words: hardware companies were interdependent, and as the biggest fish in the sea, IBM should exploit that fact. A few years[] later[,] IBM was raking in \$2 billion a year of almost pure profit from licensing revenue.

Id.

76. See Fortune, Fortune Global 500 2007, http://money.cnn.com/magazines/fortune/global500/2007/full_list/index.html (last visited Feb. 27, 2008).

77. Press Release, IBM, IBM to Acquire Softek: Combination to Provide Clients the Ultimate Choice for Data Mobility (JAN. 29, 2007), <http://www-03.ibm.com/press/us/en/pressrelease/20976.wss> ("The acquisition of Softek is the latest example of IBM's continuing strategy to blend software, hardware, and research into higher-margin, standardized services that can be used with multiple clients to help them transform their businesses."); see Rick Sherman, *BI Briefs: IBM Acquires Ascential Software*, DMREVIEW.COM, Mar. 17, 2005, http://www.dmreview.com/article_sub.cfm?articleId=1023419 (stating that IBM acquisition of Ascential Software was its twenty-first software acquisition in four years).

78. Press Release, IBM, IBM to Acquire Softek, *supra* note 77.

users.⁷⁹ IBM hopes to integrate Softek's technology with IBM's methods and expertise in storage and data services, resulting in helping clients "increase the flexibility, efficiency and reliability of moving data, enabling them to quickly respond to market needs and seize new opportunities."⁸⁰

Another example of acquisition for further research and development is IBM's purchase of MRO Software, Inc., the leading provider of asset and service management software and consulting.⁸¹ MRO software is a powerful addition to IBM's portfolio of software and services, enabling IBM to provide clients with a single approach to managing all industrial and information technology assets.⁸²

IBM also acquired Internet Security Systems, Inc. for its software, appliances, and services monitors used to manage and control network vulnerabilities.⁸³ With this acquisition, IBM has replaced labor-based processes with standardized software-based services to help clients optimize their businesses. Additionally, IBM purchased Watchfire, a privately held security and compliance testing software company. IBM integrated its software with Watchfire's to improve the process for developing web applications.⁸⁴

B. *The Offensive Use Model*

After witnessing large corporations discover the use of patents in their business strategy and reap handsome profits through their patent licensing programs, some smaller entities chose to adopt a new model of acquiring patents for offensive purposes.

Under this new model, a small company acquires patents or patentable inventions, hoping to use litigation strategy to reap generous returns during the legal life of the patents.⁸⁵ The small company does not expect the returns to come from manufacturing of

79. *Id.*

80. *Id.*

81. Press Release, IBM, IBM to Acquire MRO Software, Inc.: Deal to Help Clients Efficiently Manage Wide Range of Assets (Aug. 3, 2006), <http://www-03.ibm.com/press/us/en/pressrelease/20062.wss>.

82. *See id.* (detailing IBM's plans following its completed acquisition of MRO Software, Inc.).

83. *See* Press Release, IBM, IBM to Acquire Internet Security Systems: Acquisition Bolsters IBM's Position as a Leader in Security Solutions (Aug. 23, 2006), <http://www-03.ibm.com/press/us/en/pressrelease/20164.wss>.

84. Press Release, IBM, IBM Completes Acquisition of Watchfire (July 23, 2007), <http://www-03.ibm.com/press/us/en/pressrelease/21921.wss>.

85. *See* Ingram, *supra* note 56 (stating that recent high-profile patent infringement cases feature small companies suing "giants" such as Microsoft and eBay).

products or providing direct services based on the innovations.⁸⁶ The small company lacks the resources, personnel, and facilities to conduct further research and development or to create end products or services.⁸⁷ The company instead realizes its returns on the investment when it finds potentially deep-pocketed infringers or companies with a large customer base using allegedly infringing products or services.⁸⁸ The infringers, through litigation and threat of injunction, will be forced to pay the patent holder for the infringement of its patents.⁸⁹

As a result of the offensive use of patents, there is an emerging secondary market for intellectual property acquired by holders who are not the original inventors or assignees.⁹⁰ There are also websites that specialize in patent brokerage, bringing ancillary patents to the marketplace.⁹¹

A notorious example of the offensive use of patents was highlighted in the testimony provided by David Simon, Chief Patent Counsel for Intel Corporation, at a congressional hearing on patent reform.⁹² TechSearch was a patent holding company that acquired patents from bankruptcy sales of distressed companies.⁹³ TechSearch

86. See Mann, *supra* note 44, at 1023 (noting the increase of patent “trolls,” which upset the licensing equilibrium because trolls do not make products).

87. See Jessica Holzer, *Supreme Court Buried Patent Trolls*, FORBES.COM, May 16, 2006, http://www.forbes.com/home/businessinthebeltway/2006/05/15/ebay-scotus-patent-ruling-cx_jh_0516scotus.html (reporting that small patent holding companies do not use their patents, but sue others for patent infringements); *Google Sued for \$5B*, REDHERRING, DEC. 29, 2005, <http://www.redherring.com/Home/15098> (discussing Rates Technology as an example of a small patent-holding company with a history of suing large technology companies for patent infringements).

88. See Joris Evers, *Patent Hoarders Intensify Protection Issue*, LINUXWORLD.COM, Nov. 19, 2004, <http://www.linuxworld.com.au/index.php/id:1874419189;fp:4;fpid:1> (reporting the recent formation of a new industry of companies that obtain and hold patents only to enable them to sue infringing companies for monetary damages).

89. See Holzer, *supra* note 87 (“[P]atent [holding companies] are notorious for using the threat of permanent injunction to extort hefty fees in licensing negotiations as well as huge settlements from companies they have accused of infringing.”).

90. See *ThinkFire Establishes Patent Brokerage Division*, IPFRONTLINE.COM, Oct. 3, 2005, <http://www.ipfrontline.com/depts/article.asp?id=6231&deptid=8> (reporting that ThinkFire is a company specializing in the purchase and sale of patents in many technological fields).

91. See, e.g., Global Technology Transfer Group, <http://www.gttgrp.com/service/s/noncoreip.htm> (last visited Jan. 29, 2008); Patent Bridge Website, <http://www.patentbridge.com/> (last visited Jan. 29, 2008).

92. See *Patent Quality Improvement: Hearing Before the Subcomm. On Courts, the Internet, and Intellectual Property of the H. Comm. on the Judiciary*, 108th Cong. 31 (July 24, 2003) (statement of David Simon, Chief Patent Counsel, Intel Corp.) (presenting the TechSearch case as an example of a frivolous patent claim that led to extensive litigation for Intel).

93. See *id.* (noting that TechSearch bought a patent in a bankruptcy sale, then used that patent to sue Intel).

was not in the semiconductor business, and had neither semiconductor engineers nor computer designers among its employees. TechSearch purchased a patent for \$50,000 and later used the patent to sue Intel, seeking an injunction and \$8 billion in damages.⁹⁴

There is another model of acquisition for offensive use, wherein a shell company purchases patents for both defensive and offensive use. An example of a company that used this practice and attracted national media attention is Intellectual Ventures, founded by Nathan Myhrvold, former Microsoft Chief Technologist.⁹⁵ The company aggressively purchased innovations from inventors in the areas of “software, e-commerce, communications, semiconductors, consumer electronics and computer architecture.”⁹⁶ The company asserted that it acquired innovations defensively, claiming it purchased patents that could pose threats to its investors such as Microsoft, Intel, Sony, Apple, Nokia, Google, and eBay.⁹⁷ Offensively, the company sought to license the innovations to others⁹⁸ and to use its patent arsenal to collect damages against infringing defendants.⁹⁹

In summary, many companies today procure or acquire intellectual property to further the research, development and augmentation of their existing technology. These companies serve their customers by licensing the integrated portfolios. In essence, licenses have become the product itself.¹⁰⁰ However, some companies exploit their patent acquisitions not for innovation related purposes, but to force others to litigate or settle.

94. *See id.* (explaining further that obtaining an injunction would not benefit TechSearch because TechSearch did not produce semiconductors, that TechSearch was only after money, and that threatening an injunction was only a means of harassing Intel).

95. *See* Brad Stone, *Factory of the Future?*, NEWSWEEK, Nov. 22, 2004, at 60 (“Microsoft alum Nathan Myhrvold runs a firm that doesn’t make anything, but it’s hoarding the key to a new business age: intellectual property.”).

96. *Id.*

97. *See id.* (reporting that Myhrvold has raised \$350 million in investments from these large high tech firms).

98. *See id.* (explaining that Myhrvold set up a “patent marketplace” that allows a patent owner to get money up front, gives investors the legal right to use those ideas, and allows Myhrvold to rent those ideas to other companies).

99. *See id.* (“Referring to Intellectual Ventures’ portfolio of patents as his own, [Myhrvold] says, ‘If giant corporations are making billions of dollars off my ideas, I want something for it, and I don’t think there is anything wrong with that.’”).

100. *See generally* Robert W. Gomulkiewicz, *The License is the Product: Comments on the Promise of Article 2B for Software and Information Licensing*, 13 BERKELEY TECH. L.J. 891, 895–99 (1998) (noting that the license is the product for software because the license delivers the use rights, and discussing the use of standard form contracts as a way of providing software licenses to the mass market).

III. INNOVATIONS AND CURRENT TAX POLICY

Although some companies have shifted their business model to using intellectual property portfolios, it is undeniable that these portfolios are important assets in positioning the companies in the marketplace. Regardless of whether a company acquires innovations to augment its existing technologies for the development of viable products or merely for licensing strategies, it is undeniable that the innovation market is heavily segmented. Startups and research universities have transformed themselves into innovation production centers.¹⁰¹ A robust acquisition market for innovation, triggered by adequate economic incentives to purchase innovation at various development stages, is needed to supplement current economic incentives for the development market. Sound tax policy could be a useful tool in shaping the robust acquisition market of innovation. Unfortunately, current tax incentives for innovation benefit the development market only and do not reflect the realities of the present segmented innovation market.

A. *Current Tax Regime Governing Innovation Development*

In 1954, Congress created a special tax incentive for inventors to encourage innovation development.¹⁰² That incentive, found in § 174 of the Internal Revenue Code (“Code”), permits a taxpayer to deduct immediately research and development expenditures that would otherwise have to be capitalized.¹⁰³ This special provision is an important exception to the widely accepted general principle that taxpayers must capitalize expenditures that produce benefits lasting beyond the current tax year.¹⁰⁴ The exception from the normative capitalization rule is justified because it encourages new research and development activity and stimulates economic growth and technological development.¹⁰⁵

101. See *supra* Part I.B (discussing how universities and startup companies interact to create innovations).

102. See I.R.C. § 174(a) (allowing taxpayers to treat research or experimental expenditures as expenses not chargeable to capital account as long as those expenditures are related to the taxpayers trade or business).

103. See I.R.C. § 263(a)(1)(B) (providing that the capitalization rules under § 263(a) do not apply to research or experimental expenditures deductible under § 174(a)). See generally MAINE & NGUYEN, *supra* note 14, at 132–56 (providing a thorough discussion of § 174).

104. Yale, *supra* note 13, at 549.

105. See, e.g., Donald C. Alexander, *Research and Experimental Expenditures Under the 1954 Code*, 10 TAX L. REV. 549, 549 (1955) (noting a primary reason for enacting § 174 was to create an incentive for new products and inventions through federal subsidy of research and development startups and to better apportion specific ordinary and necessary business costs to particular activities); William Natbony, *The*

Also in 1954, Congress enacted § 1235 of the Code, another special rule for inventors.¹⁰⁶ Section 1235 provides statutory assurance to inventors that the sale of their inventions will qualify for reduced capital gains rates,¹⁰⁷ as opposed to ordinary income tax rates,¹⁰⁸ even if: (1) the sale involves installment or contingent payments,¹⁰⁹ (2) the

Tax Incentives for Research and Development: An Analysis and a Proposal, 76 GEO. L.J. 347, 349 (1987) (explaining that Congress decided to provide taxpayers with the option of an immediate deduction in order to encourage new research and development); Richard L. Parker, *The Innocent Civilians in the War Against NOL Trafficking: Section 382 and High-Tech Start-Up Companies*, 9 VA. TAX REV. 625, 694 (1990) (“The deduction election under § 174(a) is intended to encourage research and development activities by allowing the cost of such activities to be used to offset the income earned in the business at the earliest possible date.”); see also David S. Hudson, *The Tax Concept of Research or Experimentation*, 45 TAX LAW. 85, 88–89 (1991) (explaining that another justification for departure is that the capitalization rule is difficult to apply to innovation development costs: research may not result in the development of a patent or other identifiable asset; research often spans several years with varying degrees of success; different and simultaneous research activities may contribute in varying degrees to the development of an asset or more than one asset; and research related to a project may partly fail and partly succeed); George Mundstock, *Taxation of Business Intangible Capital*, 135 U. PA. L. REV. 1179, 1258–59 (1987) (stating that another reason for enacting § 174 was to reduce the uncertainty caused by applying the asset-capitalization rules to research and development).

106. See I.R.C. § 1235 (guaranteeing capital gains rates, as opposed to higher ordinary income tax rates, for any transfer of all substantial rights to a patent (or of an undivided interest in all such rights to a patent) by certain holders to unrelated parties); H.R. REP. NO. 83-1337 (1954); S. REP. NO. 83-1622 (1954), as reprinted in 1954 U.S.C.C.A.N. 4621.

107. See JOHN A. MILLER & JEFFREY A. MAINE, *THE FUNDAMENTALS OF FEDERAL TAXATION* 211 (2007) (giving several policy reasons offered for the tax rate preference accorded to capital gains).

Individual taxpayers generally prefer gains to be classified as capital gains rather than ordinary income because certain capital gains are afforded preferential tax treatment. Presently, the maximum rate at which most *long-term capital gains* are taxed is 15% (for tax years beginning before December 31, 2010), whereas the highest rate at which other types of income (*ordinary income* and *short-term capital gains*) are taxed is 35%—a significant rate differential for high earners.

Id.

108. I.R.C. §§ 1(a)–(d), (i)(1)–(2). Presently, the basic tax rates for individuals are set out in § 1 of the Code.

[Sub]sections 1(a) through (d)[.] as adjusted by subsection (i)(2) . . . currently establish five tax rates on ordinary income: 15%, 25%, 28%, 33%, and 35%. Subsection 1(i)(1) adds a 10% rate. Each rate applies to a different segment of income known as a *tax bracket*. It is the combined effect of the tax rates and the tax brackets that creates the rate structure. The rates rise with the tax brackets. Thus, the 10% rate applies to the lowest tax bracket and the 35% rate applies to the highest tax bracket.

MILLER & MAINE, *supra* note 107, at 193.

109. See I.R.C. § 1235(a) (providing that § 1235 applies regardless of whether the payments received are payable periodically over a period generally coterminous with the transferee’s use of the patent or are contingent on the productivity, use, or disposition of the property transferred); see also S. REP. NO. 83-1622, at 439 (1954), as reprinted in 1954 U.S.C.C.A.N. 4621, 5082 (stating that § 1235 was intended “to give statutory assurance to certain patent holders that the sale of a patent (whether as an ‘assignment’ or ‘exclusive license’) shall not be deemed not to constitute a ‘sale or exchange’ for tax purposes solely on account of the mode of payment”).

transferor is a professional inventor and would otherwise have to report ordinary income under general tax rules,¹¹⁰ and (3) the invention has been held for less than one year and would otherwise not meet the requisite one-year holding period under the general capital gains provisions.¹¹¹ By assuring inventors that sales of their inventions qualify for special tax treatment, § 1235 is designed to encourage research and development that potentially leads to patentable inventions. Indeed, a stated policy goal underlying § 1235's enactment is "to provide an incentive to inventors to contribute to the welfare of the Nation."¹¹²

Under these special tax rules, an inventor may presumably deduct research costs and then enjoy a low capital gains tax on the later sale of the resulting innovation.¹¹³ Unfortunately, these innovation development incentives, enacted more than fifty years ago, contain limitations that minimize their effectiveness and fail to reflect the realities of today's innovation market.

Section 174 has limited applicability in that it requires research expenditures be incurred in connection with the inventor's trade or business.¹¹⁴ A taxpayer need not be currently conducting a business (i.e., producing or selling any product) in order for research or

110. See H.R. REP. NO. 83-1337, at A280 (1954); S. REP. NO. 83-1622 at 113 (1954), as reprinted in 1954 U.S.C.C.A.N. 4621, 4747 (stating that § 1235 can provide capital gains treatment to all inventors, whether amateur or professional, regardless how often they sell their patents).

111. See I.R.C. § 1222(3). The tax treatment of a capital gain depends generally on the property's holding period. Under general characterization rules, only long-term capital gains are accorded preferential tax treatment. A long-term capital gain requires a holding period of more than one year. Under the special characterization provision of § 1235, however, the actual holding period becomes irrelevant.

112. S. REP. NO. 83-1622, at 439 (1954), as reprinted in 1954 U.S.C.C.A.N. 4621, 5082.

113. A related incentive for inventors is the exemption from the "recapture" rules of § 1245. Under § 1245, any gain recognized on the disposition of intangible personal property must be reported as ordinary income—not capital gain—to the extent of any deductions (e.g., depreciation and amortization) taken with respect to the property. I.R.C. § 1245(a)(1). In other words, any part of the gain that is attributable to depreciation or amortization deductions previously attributable to the transferred property must be recaptured as ordinary income and taxed at ordinary rates, whereas any part of the gain that is attributable to economic appreciation may be taxed at capital gains rates. Although intangible personal property is generally subject to recapture, see *Newton Insert Co. v. Comm'r*, 61 T.C. 570, 587 (1974), *aff'd*, 545 F.2d 1259 (9th Cir. 1976), the government has clarified in an administrative pronouncement that inventions, the creation costs of which were expensed under § 174, are not subject to § 1245 recapture. See Rev. Rul. 85-186, 1985-2 C.B. 84 (providing that § 174(a) deductions need not be recaptured as ordinary income on later sale). Thus, the entire amount of gain recognized by an inventor on a later sale—gain attributable to research and experimental costs expensed under § 174, as well as gain attributable to true economic appreciation in value of the invention—may receive preferential capital gains treatment under § 1235.

114. I.R.C. § 174(a).

experimental expenditures to meet the “in connection with a trade or business” requirement under § 174;¹¹⁵ however, courts have held that a taxpayer must demonstrate a realistic prospect of entering into a trade or business that will exploit the technology under development.¹¹⁶ In making this determination, the taxpayer must demonstrate both an objective intent to enter into the trade or business and the capability to do so.¹¹⁷ This requirement fails to recognize that, in today’s innovation marketplace, very few individual inventors, startup companies, and young research entities develop their innovations into end products or services for commercial exploitation in trade or business, but rather intend to sell or license their innovations to larger companies looking to acquire innovations to supplement their own research or build promising intellectual property portfolios.¹¹⁸ It is not completely clear whether § 174 applies to a developer who intends to exploit the resulting innovation through sale or license. As a general rule, the receipt of royalties alone does not constitute a trade or business.¹¹⁹ The Tax Court, in a few cases, has held that research activities and exploitation of the resulting inventions by sale or license may constitute a trade or

115. Prior to 1974, the Internal Revenue Service (“IRS”) and the courts took the position that to qualify for § 174 treatment, a taxpayer must have already engaged in a trade or business. See *Best Universal Lock Co. v. Comm’r*, 45 T.C. 1 (1965), *acq.*, 1966-2 C.B. 4; *Koons v. Comm’r*, 35 T.C. 1092 (1961). The U.S. Supreme Court rejected this narrow approach and held that pre-operational research or experimental expenditures could qualify for the § 174 deduction. *Snow v. Comm’r*, 416 U.S. 500, 503–04 (1974).

116. See *Kantor v. Comm’r*, 998 F.2d 1514, 1518 (9th Cir. 1993) (stating that a “taxpayer must demonstrate a ‘realistic prospect’ of subsequently entering its own business in connection with the fruits of the research, assuming that the research is successful”); see also *Zink v. United States*, 929 F.2d 1015, 1023 (5th Cir. 1991); *Spellman v. Comm’r*, 845 F.2d 148, 149 (7th Cir. 1988); *Stauber v. Comm’r*, 63 T.C.M. (CCH) 2258 (1992); *Diamond v. Comm’r*, 92 T.C. 423, 439 (1989), *aff’d*, 930 F.2d 372 (4th Cir. 1991).

117. See *Kantor*, 998 F.2d at 1518–19 (holding that the partnership did not possess either the objective intent to market or the capability of marketing the developed software at the time it incurred the research expenditures); see also *Glassley v. Comm’r*, 71 T.C.M. (CCH) 2898 (1996) (denying § 174 deductions for expenditures to develop jojoba plants and seeds because taxpayer had neither intent nor capability to enter jojoba farming business); *Diamond*, 930 F.2d at 375 (“The question is not whether it is possible in principle, or by further contract, for [the taxpayer] to engage in a trade or business, but whether, in reality, the [taxpayer] possessed the capability in the years before the court to enter into a new trade or business in connection with the [products being developed].”).

118. See *supra* Part I (discussing the increasing segmentation of the innovation market).

119. See H.R. REP. NO. 97-201, at 113 (1981) (laying out rules for the application of § 174, but not explicitly naming licensing as a trade or business that entitles taxpayers to relief under that provision).

business.¹²⁰ However, such cases involved inventors who had developed a series of inventions.¹²¹ Arguably, § 174 does not apply to an inventor who has not yet established herself in the trade or business of being an inventor, but who nevertheless licenses the results of her inventive activities for taxable income. Such a result seems contrary to the goal behind innovation incentives generally.

Like § 174, § 1235 is of limited application. First, § 1235 applies only to patents and patentable products, designs and inventions and, arguably, does not apply to other desirable innovations, such as trade secrets and computer software, both of which may not be patentable.¹²² Second, § 1235 applies only to a transfer of “all substantial rights” to a patent, which does not include grants that are limited geographically within the country of issuance or grants that are limited to fields of use within trades or industries.¹²³ Third, and

120. See *Kilroy v. Comm’r*, 41 T.C.M. (CCH) 292, 295 (1980) (permitting deductions where actions, over a period of years, relating to inventing activities suggested taxpayers were engaged in the trade or business of inventing); *Louw v. Comm’r*, 30 T.C.M. (CCH) 1421, 1422–23 (1971) (permitting deductions since taxpayer’s free-lance inventive activities were of sufficiently sustained character to qualify as engaging in a trade or business of an inventor); *Avery v. Comm’r*, 47 B.T.A. 538, 542 (1942) (permitting business deductions where taxpayer sold some inventions and licensed other inventions for monetary considerations).

121. See *Kilroy*, 41 T.C.M. (CCH) at 295 (six patents); *Avery*, 47 B.T.A. at 540 (twelve patents). But see *Cleveland v. Comm’r*, 297 F.2d 169, 173 (4th Cir. 1961) (one invention).

122. Section 1235 applies only to patents and not to other forms of intellectual property, such as copyrights and trademarks. S. REP. NO. 83-1622, at 441 (1954), as reprinted in 1954 U.S.C.A.N. 4621, 5084. Although the Code does not define a patent for purposes of § 1235, the regulations provide that the term “patent” means a patent granted under the provisions of Title 35 of the U.S. Code, as well as any foreign patent with rights generally similar to those under a U.S. patent. Treas. Reg. § 1.1235-2(a). Because § 1235 uses the language “rights to a patent,” an inventor may receive capital gains treatment in the early stages of the inventive process. In fact, nothing seems to prevent an inventor from receiving capital gains treatment at the “eureka” moment if the inventor transfers all substantial rights. This position was first declared in *Philbrick v. Comm’r*, 27 T.C. 346, 356 (1956), *acq.*, 1958-2 C.B. 7:

The reports of the Senate Finance Committee and of the Conference Committee on this latter section indicate that [“rights to a patent”] was substituted, in lieu of a previously suggested phrase reading “rights evidenced by a patent,” in order to make clear that the section applied, even though the patent itself might not have been issued at the time of the transfer, and even though an application for the patent might not then have been made.

Id. Essentially, all that must be transferred is all substantial rights to a patentable product, design, invention, or plant. *Gilson v. Comm’r*, 48 T.C.M. (CCH) 922 (1984). The regulations now provide for the same. Section 1.1235-2(a) of the Treasury regulations states that it is unnecessary for a patent application to be in existence if the other requirements of § 1235 are met. Treas. Reg. § 1.1235-2(a).

123. The term “all substantial rights” refers to “all rights (whether or not then held by the grantor) which are of value at the time the rights to the patent (or an undivided interest therein) are transferred.” Treas. Reg. § 1.1235-2(b)(1). Whether or not all substantial rights to a patent are transferred in a transaction depends upon the circumstances surrounding the entire transaction and not the particular

most significantly, § 1235's favorable capital gains treatment applies only if the transferor is a statutorily defined "holder" of the patent.¹²⁴ The holder of a patent is defined as any individual whose personal efforts created the patent property.¹²⁵ In other words, only individuals (original inventors) can qualify under § 1235 as holders.¹²⁶ This limits the benefits of the provision to individual inventors working out of their garage. As a result, § 1235 provides absolutely no economic benefit to the more common startup companies and small research entities whose employees conduct their research.¹²⁷

Perhaps the biggest flaw with both incentive provisions—§ 174 and § 1235—is that they focus on the innovation development market only.¹²⁸ They reward the inventor/transferor only. But mere

terminology used in the transfer instrument. *Id.* Although the facts and circumstances surrounding a transfer are to be considered, the regulations list four transfers that, because they are limited in scope, do not result in a transfer of all substantial rights to qualify for favorable capital gains treatment under § 1235. They are: (1) the grant of a patent that is limited geographically within the country of issuance; (2) the grant of a patent that is limited in duration by the terms of the agreement; (3) the grant of a patent that is limited to fields of use within trades or industries, that are less than all the rights covered by the patent, and that exist and have value at the time of the grant; and (4) the grant of less than all the claims or inventions covered by the patent that exist and have value at the time of the grant. *Id.* § 1.1235-2(b)(1)(i)-(iv). The regulations also provide two examples of rights that may be retained by the holder because they are not considered "substantial": (1) the retention by the transferor of legal title for the purpose of securing performance or payment by the transferee in a transaction involving the transfer of an exclusive license to manufacture, use, and sell for the life of the patent; and (2) the retention by the transferor of rights in the property that are not inconsistent with the passage of ownership, such as the retention of a security interest (such as a vendor's lien), or a reservation in the nature of a condition subsequent (such as a provision for forfeiture on account of nonperformance). *Id.* § 1.1235-2(b)(2)(i)-(ii).

124. I.R.C. § 1235(a).

125. I.R.C. § 1235(b)(1); Treas. Reg. § 1.1235-2(d)(1)(i). More specifically, the regulations provide that a holder is any individual whose efforts created the patent property and who would qualify as the "original and first" inventor, or joint inventor, under the patent laws. *See id.* (referring to Title 35 of the Code). An inventor's employer would not qualify as a holder "even though he may be the equitable owner of the patent by virtue of an employment relationship with the inventor." S. REP. NO. 83-1622, at 439-40 (1954), *as reprinted in* 1954 U.S.C.C.A.N. 4621, 5082-83.

126. Although corporations and partnerships may not be qualified holders, each member of a partnership who is an individual, however, may qualify as a holder as to his or her pro-rata share of a patent owned by the partnership. Treas. Reg. § 1.1235-2(d)(2).

127. *See supra* Part I.B (describing the increasing role of start-up companies and universities in innovation development).

128. Another tax incentive for the innovation development market is the research credit found in § 41 of the Code. I.R.C. § 41. The temporary credit has been modified and extended many times since the Economic Recovery Tax Act of 1981 created it. Pub. L. No. 97-34, § 221(a), 95 Stat. 172, 241 (1981) (codified as amended at I.R.C. § 41) (establishing original research credit as I.R.C. § 44F). The general research credit is incremental, such that it is equal to a certain percentage of qualified research spending above a base amount, which can be thought of as a firm's normal level of research and development investment. The incremental

inventive activity alone does not contribute to the nation's welfare. The transfer of innovation to the right acquirers for further research and product development or licensing is also important and must be encouraged. Unfortunately, the current tax regime fails to adequately incentivize acquisitions of innovation.

B. Current Tax Regime Governing Innovation Acquisitions

Unlike innovation development costs, innovation acquisition costs are not subject to any special tax rules, but instead are governed by the general rules applicable to all intangible property.¹²⁹ Under these rules, the costs of acquiring innovation are not deductible when incurred, but are subject to the general capitalization principle.¹³⁰ More specifically, a taxpayer is required to capitalize amounts paid to another party in a purchase or similar transaction to acquire innovation from that party.¹³¹

Capitalized innovation acquisition costs are then deducted over time through tax depreciation rules.¹³² In an economic sense, "depreciation is the decline in value of an asset due to wear and tear and obsolescence."¹³³ In the tax sense, depreciation is a deduction from income, permitting the taxpayer to recover the cost of that asset.¹³⁴ Depreciation methods are sometimes called cost recovery

nature of the credit provides an incentive for increasing research and development expenditures over time. It might be possible for research expenses to qualify for the credit under § 41, as well as qualify for the deduction under § 174. In such a case, to the extent a credit is taken under § 41, deductions under § 174 must be reduced pursuant to § 280C. A taxpayer can elect to claim a reduced research credit under § 41 and thereby avoid a reduction of the § 174 deduction. I.R.C. § 280C(c)(1)–(3).

129. *E.g.*, I.R.C. §§ 197, 263(a).

130. I.R.C. § 263(a); Treas. Reg. § 1.263(a)-4.

131. Treas. Reg. § 1.263F(a)-4(b)(1)(i), 4(c)(1). Treasury regulations list patents as an example of intangibles that must be capitalized if acquired from another person. *Id.* § 1.263(a)-4(c)(1)(vii), (viii), (xiv). The capitalization rule is broader, however, and applies also to "separate and distinct intangible asset[s]" acquired from another person. *Id.* § 1.263(a)-4(b)(1)(iii). The term "separate and distinct intangible asset" means: (1) a property interest of ascertainable and measurable monetary value (2) that is subject to protection under applicable state, federal, or foreign law, and (3) the possession and control of which is intrinsically capable of being sold, transferred, or pledged (ignoring any restrictions imposed on assignability) separate and apart from a trade or business. *Id.* § 1.263(a)-4(b)(3)(i). A taxpayer is also required to capitalize transaction costs that facilitate the taxpayer's acquisition. *Id.* § 1.263(a)-4(b)(1)(v), 4(e)(1)(i). A taxpayer is not required to capitalize employee compensation and overhead costs related to an intangible acquisition, apparently due to burdens of allocating such transaction costs among acquired intangible assets. *Id.* § 1.263(a)-4(e)(4)(i).

132. *E.g.*, I.R.C. §§ 167, 197.

133. MILLER & MAINE, *supra* note 107, at 118.

134. *See id.* at 118 (providing an overview of the concept of depreciation).

systems.¹³⁵ So, for example, if a patent used in our business for five years cost us \$20,000, we might take a \$4,000 deduction each year on our taxes for five years to reflect the decline in value of that asset and to reflect its contribution to the production of gross income.¹³⁶ We do not deduct the entire cost of the patent all at once because the patent helped produce income over five years. If we are going to match our expenses against the revenues they helped produce, we must spread out the deduction over the useful life of the patent.¹³⁷ This is, of course, a basic application of the principle discussed above that the costs of assets must be capitalized.¹³⁸

As this example illustrates, the goal of tax depreciation is to achieve a fair allocation of the costs of acquiring an asset to the period in which the purchaser realizes income from the asset. In other words, depreciation provides an accurate measurement of income. As explained below, the government has departed from this tax policy goal with respect to innovation acquisition. It might be argued that departure from accurate income measurement might be justified to lower compliance and administrative costs. Ironically, the current regime fails to achieve either effective administration or accurate income measurement. As discussed below, the capitalized costs of acquiring innovation are subject to a host of irrational tax depreciation rules. Specifically, different methods¹³⁹ and different periods¹⁴⁰ for recovery of capitalized innovation acquisition costs are

135. As explained below, there are different methods of depreciating the capitalized acquisition costs of separately acquired patents. The simplest method of depreciation is known as the “straight-line method,” under which the capitalized costs of acquiring patents (less salvage value) are deducted ratably over the property’s estimated useful life. I.R.C. § 167; Treas. Reg. § 1.167(b)-1.

136. This is the straight-line method of depreciation. *See infra* note 151.

137. If \$20,000 were deductible in full in the year of acquisition, then there would be a mismatch of income and the expenses that produced that income. Income would be understated in the year of acquisition and overstated in later years. To avoid this problem and to better allocate the acquisition cost, we are not entitled to an immediate deduction in the year of acquisition, but are allowed \$4,000 annual depreciation tax deductions over the patent’s five-year useful life. At the end of the patent’s useful life, the acquisition costs will have been fully recovered, and the patent’s basis will be zero, reflecting that all capitalized costs have been recovered fully. *See* I.R.C. § 1016(a)(2) (providing that the patent’s basis is reduced each year as depreciation deductions are taken with respect to the asset).

138. *See supra* note 13 and accompanying text.

139. Capitalized innovation acquisition costs are depreciated using either the “straight-line method” or the “income-forecast method” depending on a number of factors. *See infra* notes 152–160 and accompanying text. Accelerated or “bonus” depreciation methods that are available for depreciable tangible property are not available for intangible innovations. *See* I.R.C. § 168(b) (providing generally that the double declining balance method applies if the property is tangible).

140. Some innovations are depreciated over an arbitrary fifteen-year period regardless of the asset’s legal or useful life. Other innovations are depreciated over their useful life. Others are depreciated only as the innovation generates income. As

provided depending on the type of innovation acquired,¹⁴¹ the manner of procurement,¹⁴² and even the method of payment.¹⁴³

1. Current tax depreciation rules for capitalized innovation acquisition costs

The starting point for determining the proper depreciation deductions for capitalized innovation acquisition costs is § 197 of the Code.¹⁴⁴ Enacted in 1993, § 197 provides a single depreciation method (straight-line depreciation) and a single recovery period (fifteen years) for the costs of acquiring many forms of innovation.¹⁴⁵ Law enacted prior to 1993 continues to apply for depreciating the costs of acquiring all other forms of innovation (i.e., innovations not within the scope of § 197).¹⁴⁶

Section 197 provides a list of intangible assets that fall within the definition of “section 197 intangibles” and are subject to fifteen-year amortization.¹⁴⁷ A “section 197 intangible” includes any patent,

with the appropriate depreciation method, the appropriate recovery period depends on a number of factors. *See infra* notes 145–153 and accompanying text.

141. As will be discussed, trade secrets and know-how, patents, and computer software are treated differently for depreciation purposes. Trade secrets purchased separately (not in connection with the purchase of other assets that constitute a trade or business) are depreciated over *fifteen years*. Patents acquired separately are depreciated over their *useful life*. Computer software acquired separately is depreciated over *three years*. *See infra* notes 145–152 and accompanying text.

142. Innovation may be acquired in a transaction involving the acquisition of a trade or business or may be acquired separately or with a group of assets that collectively do not constitute a trade or business. For many types of innovation, such as patents, patent applications, and computer software, depreciation rules differ depending on the method of procurement. *See infra* notes 149–152, 172 and accompanying text.

143. As consideration, innovation acquirers may make up-front principal payments, installment payments of a fixed amount, payments contingent on exploitation of the innovation, or use any combination of these methods. When contingent payments are made, depreciation rules differ depending on whether the innovation is acquired separately or with a trade or business. *See infra* notes 173–176 and accompanying text.

144. I.R.C. § 197(a).

145. *See* STAFF OF J. COMM. ON TAXATION, 103D CONG., TECHNICAL EXPLANATION OF TAX SIMPLIFICATION ACT OF 1993 147 (Comm. Print 1993) (explaining that Congress created § 197 to eliminate considerable confusion over the federal tax treatment of amortizable intangible assets). Specifically, § 197 provides a fifteen-year depreciation deduction for the capitalized costs of an “amortizable section 197 intangible,” and prohibits any other depreciation or amortization deduction with respect to that property. I.R.C. § 197(a)–(b). Section 197 defines an “amortizable section 197 intangible” as any “section 197 intangible” acquired after August 10, 1993, and held in connection with a trade or business or an activity conducted for profit. *Id.* § 197(c)(1). Section 197 provides a list of intangible assets that fall within the definition of “section 197 intangible” and are subject to fifteen-year amortization. *Id.* Section 197 also specifically excludes certain intangible assets. *Id.*

146. *See* Treas. Reg. § 1.167(a)-14(a) (providing that intangibles excluded from § 197 are depreciable only if they qualify as property subject to the allowance for depreciation under § 167(a)).

147. I.R.C. § 197(d).

formula, process, design, pattern, know-how, format, or other similar property.¹⁴⁸ Although the definition of “section 197 intangible” appears broad enough to encompass nearly all forms of innovation, there is an important exception for certain intangibles not acquired in a transaction (or series of related transactions) involving the acquisition of assets constituting a trade or business or substantial portion thereof.¹⁴⁹ For example, § 197 intangibles do not include any interest in a patent or patent application that is not acquired as part of a purchase of a trade or business.¹⁵⁰ Such patents and patent applications acquired separately are not subject to § 197’s ratable fifteen-year amortization. Rather, depreciation for these acquired assets continues to be governed by pre-§ 197 law.¹⁵¹

Under pre-§ 197 law, the capitalized costs of innovations (i.e., separately acquired innovations, such as patents) are recovered under

148. I.R.C. § 197(d)(1)(C); Treas. Reg. § 1.197-2(b)(5).

149. I.R.C. § 197(e)(4). A trade or business that is acquired in a series of related transactions will be considered acquired in one transaction for § 197 purposes. *Id.* Whether the exception for separately acquired patents applies depends on whether the assets were acquired in a transaction (or series of related transactions) involving the acquisition of assets constituting a trade or business or substantial portion thereof. This determination is not always easy. For purposes of § 197, an asset, or group of assets, constitutes a trade or business or a substantial portion thereof if its use would constitute a trade or business under § 1060. Treas. Reg. § 1.197-2(e)(1). A group of assets constitutes a trade or business if (1) the use of such assets would constitute an active trade or business under § 355, or (2) its character is such that goodwill or going concern value could under any circumstances attach to such group. Treas. Reg. § 1.1060-1(b)(2)(A)–(B). In determining whether goodwill or going concern value should attach to assets, all facts and circumstances are taken into account, including any continuing employee relationships or covenants not to compete. Treas. Reg. § 1.197-2(e)(1). In some circumstances, the acquisition of a single asset may be treated as the acquisition of a trade or business or a substantial portion thereof. In such a case, the asset would be removed from the exception for intangibles purchased separately, thus requiring the application of § 197. H.R. REP. NO. 103-213, at 678 (1993), *as reprinted in* 1993 U.S.C.C.A.N. 1088, 1367.

150. I.R.C. § 197(e)(4)(C); Treas. Reg. § 1.197-2(c)(7). A patent includes any incidental rights, such as a trademark or a trade name, that are necessary to effect the acquisition of title to, the ownership of, or the right to use the property and that are used only in connection with that property. *Id.*

151. Treas. Reg. § 1.167(a)-14(a). Under historical depreciation rules (pre-§ 197), if an acquired intangible asset could be shown to have a limited useful life, then the capitalized acquisition costs were depreciable over that asset’s lifetime. *See* Treas. Reg. § 1.167(a)-3(a) (“If an intangible asset is known from experience or other factors to be of use in the business or in the production of income for only a limited period, the length of which can be estimated with reasonable accuracy, such an intangible asset may be the subject of a depreciation allowance.”). If, however, an acquired intangible asset could not be shown to have a limited useful life, then the acquisition costs were not depreciable, but could only be recovered upon abandonment or disposition of the asset. *See id.* (“An intangible asset, the useful life of which is not limited, is not subject to the allowance for depreciation.”). Under this legal framework, patents were eligible for depreciation allowances due to the fact that they have limited, statutorily defined legal lives. Indeed, the regulations under § 167 specifically mention patents as intangible assets eligible for depreciation. *Id.*

one of two methods: the straight-line method and the income-forecast method.¹⁵² Under the straight-line method, capitalized acquisition costs are deducted ratably over the asset's estimated useful life.¹⁵³ This recovery period is not necessarily the statutory legal life of the asset, but rather the period over which the asset may reasonably be expected to be useful to the taxpayer in his or her trade or business or in the production of income.¹⁵⁴ The example above illustrates use of the straight-line method.¹⁵⁵

Under the income-forecast method, capitalized acquisition costs are recovered as income is earned from exploitation of the innovation.¹⁵⁶ The depreciation allowance in any given year is computed by multiplying the original capitalized acquisition cost of the innovation by a fraction, the numerator of which is income from the asset for the taxable year, and the denominator of which is forecasted or estimated total income to be earned in connection with the asset during its useful life.¹⁵⁷ The following simple example illustrates the computation. In Year 1, Taxpayer purchases a patent for \$100 and estimates that forecasted total income from the patent

152. Some methods of calculating depreciation are generally not available. For example, the sliding scale method, under which depreciation is typically computed based on a declining rate of exhaustion over time, is typically unavailable. See Rev. Rul. 60-358, 1960-2 C.B. 68, *amplified by* Rev. Rul. 64-273, 1964-2 C.B. 62, *amplified by* Rev. Rul. 79-285, 1979-2 C.B. 91 (prohibiting sliding scale method to depreciate the cost of a patent). Likewise, the cost recovery method, under which a taxpayer can recover all costs before reporting any income, is generally unavailable. See *Schneider v. Comm'r*, 65 T.C. 18, 32 (1975), *acq.*, 1976-2 C.B. 2 (requiring taxpayer to use income forecast method instead of cost-recovery method because of uneven flow of income associated with asset).

153. Treas. Reg. § 1.167(b)-1 (1960). There is a statutory exception for separately acquired computer software, which is depreciated over an arbitrary three-year period. I.R.C. § 167(f); see *infra* note 227 and accompanying text.

154. Treas. Reg. § 1.167(a)-1(b). A taxpayer may establish the useful life for depreciation purposes based upon his or her own experience with similar property. If such experience is inadequate, a taxpayer may establish useful life based upon the general industry standards. *Id.* Further, a taxpayer needs only to establish useful life with "reasonable accuracy." Treas. Reg. § 1.167(a)-3(a) (2004). According to one court, "[e]xtreme exactitude in ascertaining the duration of an asset is a paradigm that the law does not demand. All that the law and regulations require is reasonable accuracy in forecasting the asset's useful life." *Houston Chronicle Publ'g Co. v. United States*, 481 F.2d 1240, 1253-54 (5th Cir. 1973). Useful life should be based on facts existing as of the close of the taxable year at issue. Treas. Reg. § 1.167(b)-0(a). The exclusive use of hindsight evidence (after the close of the taxable year in which taxpayer commences depreciation) to prove the limited useful life of property is fatal to a depreciation deduction. See, e.g., *S. Bancorporation, Inc. v. Comm'r*, 847 F.2d 131, 137 (4th Cir. 1988); *Banc One Corp. v. Comm'r*, 84 T.C. 476, 499 (1985), *aff'd*, 815 F.2d 75 (6th Cir. 1987) (unpublished).

155. See *supra* text accompanying notes 133-138.

156. I.R.C. § 167(g); see Rev. Rul. 60-358, 1960-2 C.B. 68, *amplified by*, Rev. Rul. 64-273, 1964-2 C.B. 62, *amplified by*, Rev. Rul. 79-285, 1979-2 C.B. 91.

157. See I.R.C. § 167(g); Prop. Treas. Reg. § 1.167(n)-4(a), 67 Fed. Reg. 38,025, 38,032 (May 31, 2002); Rev. Rul. 60-358, 1960-2 C.B. 68.

will be \$200. In Year 1, the patent generates income of \$80. The depreciation allowance for Year 1 is \$40, computed by multiplying the capitalized acquisition cost of \$100 by the fraction obtained by dividing current year income of \$80 by forecasted total income of \$200.¹⁵⁸ Under this approach, 40% of forecasted income was earned in Year 1, so 40% of the total purchase cost was deducted in Year 1.

In determining forecasted total income (the denominator of the income-forecast fraction), a taxpayer must only include income that the taxpayer reasonably believes will be earned from the patent up to and including the tenth taxable year after the year in which the patent is placed in service.¹⁵⁹ In the tenth taxable year, a taxpayer may deduct in full (as a depreciation allowance) the remaining unrecovered cost or other basis in the patent.¹⁶⁰ With this ten-year rule, the income-forecast method of depreciation provides a maximum recovery period of ten years for separately acquired innovations, much less than the fifteen-year recovery period for innovations acquired as part of a trade or business.

In sum, there are currently two approaches for capitalized innovation acquisition costs. First, the capitalized costs of acquiring many forms of innovation (e.g., patents and computer software

158. This example was taken from Prop. Treas. Reg. § 1.167(n)-4(e), Ex. 1, 67 Fed. Reg. 38,025, 38,033 (May 31, 2002). Taxpayers must evaluate the accuracy of their income forecasts annually. If information is discovered in a later taxable year that indicates that forecasted total income is inaccurate, a taxpayer must compute "revised forecasted total income" for the taxable year. Prop. Treas. Reg. § 1.167(n)-3(c), 67 Fed. Reg. 38,025, 38,031 (May 31, 2002). The proposed regulations under § 167(g) provide a revised computation for computing depreciation allowances in years when conditions necessitate using a revised forecasted total income that differs from the forecasted total income used in computing depreciation allowances in previous years. Prop. Treas. Reg. § 1.167(n)-4(b), 67 Fed. Reg. 38,025, 38,032 (May 31, 2002).

159. I.R.C. § 167(g)(1)(A), (g)(5)(C); Prop. Treas. Reg. § 1.167(n)-3(b), 67 Fed. Reg. 38,025, 38,031 (May 31, 2002). The projection should be based on conditions known to exist at the end of the year for which the patent is placed in service, and should include not only income that the taxpayer forecasts it will earn, but also income that may be earned by other owners of the patent during that same period. Prop. Treas. Reg. § 1.167(n)-3(b), 67 Fed. Reg. 38,025, 38,031 (May 31, 2002); Guidance on Cost Recovery Under the Income Forecast Method, 67 Fed. Reg. 38,025, 38,027 (proposed May 31, 2002) (to be codified at 26 C.F.R. pt. 1).

160. I.R.C. § 167(g)(1)(c); Prop. Treas. Reg. § 1.167(n)-4(d)(1)(ii), 67 Fed. Reg. 38,025, 38,033 (May 31, 2002). If the patent ceases to generate income before the end of the tenth year, a taxpayer may deduct in full (as a depreciation allowance) the remaining depreciable basis in the year income from the patent ceases completely. Prop. Treas. Reg. § 1.167(n)-4(d)(1)(i), -4(d)(3), 67 Fed. Reg. 38,025, 38,033 (May 31, 2002). Thus, a taxpayer may deduct as a depreciation allowance the remaining depreciable basis in the earlier of (1) the year in which the taxpayer reasonably believes that no income from the patent will be included in current year income in any subsequent taxable year up to and including the tenth taxable year following the taxable year the patent is placed in service, or (2) the tenth taxable year following the taxable year the patent is placed in service. *Id.* § 1.167(n)-4(d)(1)(i)-(ii).

acquired with a trade or business, and trade secrets and know-how acquired either separately or with a trade or business) are grouped into a single class and recovered ratably over a fifteen-year period.¹⁶¹ Second, the capitalized costs of acquiring other forms of innovation (e.g., patents acquired separately) are recovered either over the asset's useful life or, under the income-forecast method, over a maximum recovery period of ten years.¹⁶² This cost recovery regime for capitalized innovation acquisition costs presents obvious problems, illustrated in the following section.

2. *Problems with current tax depreciation rules for innovation acquisition costs*

With § 197's grouping approach, the government adopted a single depreciation method and a single recovery period "to simplify the rules for depreciating intangibles and to reduce the number of controversies arising from the need to determine which intangibles are depreciable and what their recovery periods should be."¹⁶³ The government selected the recovery period of fifteen years so that the new legislation would be approximately revenue neutral over the first five years.¹⁶⁴ Although much can be said for a simplified, revenue neutral approach, the depreciation regime is not ideal from the standpoint of encouraging desirable innovation acquisitions and achieving the tax policy goal of accurate reflection of income.¹⁶⁵

For innovations not governed by § 197, the government adopts an asset-by-asset approach.¹⁶⁶ This asset-specific approach is a better matching mechanism and provides a more accurate picture of a taxpayer's income than does an arbitrary cost-allocation mechanism for all innovations, such as the one § 197 provides (grouping all innovations acquired with a business into a single, fifteen-year category). However, the straight-line method, while offering simplicity, employs a useful life recovery period that results in the mismatch of income and costs if the acquired innovation generates an uneven flow of income. And the income forecast method, while

161. See *supra* notes 147–151 and accompanying text.

162. See *supra* notes 152–160 and accompanying text.

163. Mary LaFrance, *Days of our Lives: The Impact of Section 197 on Copyrights, Patents and Related Property*, 24 HOFSTRA L. REV. 317, 320 (1995).

164. See STAFF OF J. COMM. ON TAXATION, *supra* note 145, at 147 (acknowledging that the asset's useful life may either fall short or exceed the amortization period, but nevertheless establishing such amortization period based on goal of revenue neutrality over subsequent five fiscal years).

165. See *supra* notes 133–138 and accompanying text (demonstrating the general tax rule that the cost of assets must be capitalized).

166. See I.R.C. §§ 167, 168 (pairing depreciation models with asset types).

providing a more accurate allocation of purchase costs to the period in which the taxpayer realizes income from the patent, fails to achieve ideal allocation by capping the depreciation period at ten years.¹⁶⁷ The income-forecast method also lacks simplicity. It is often difficult to estimate all future income to be generated by a patent, in which case the method is not available to a patent acquirer.¹⁶⁸ A purchaser must always evaluate the accuracy of income forecasts annually; if a purchaser discovers information in a later year that indicates that forecasted total income is inaccurate, then the purchaser must revise the forecast.¹⁶⁹ Moreover, patents depreciated under the income-forecast method are subject to a set of complicated “look-back” rules.¹⁷⁰ These complications make the cost of tax accounting high for innovation acquirers.

Distinctions under the current depreciation regime for innovation raise some fundamental questions. For example, why is it that a patent acquired as part of the acquisition of a business is subject to ratable fifteen-year amortization (which may be shorter or longer than the actual useful life of the patent), but a patent acquired separately benefits from more rapid depreciation allowances (shorter useful life under the straight-line method or accelerated allowances under the income forecast method)? Does it make sense that all patents, regardless of type or remaining legal life, acquired along with a business are grouped into a single category with a single recovery method and period, whereas patents acquired separately are depreciated using an asset-by-asset approach? If a patent derived its value from its relationship to a product, service, or goodwill and reputation of a business like a trademark or trade name, it might make sense to include patents within the definition of § 197 and

167. See I.R.C. § 167(g)(1)(A) (taking into account only income through the property's tenth year of service).

168. See *Hadley v. Comm'r*, 819 F.2d 359, 366 (2d Cir. 1987) (denying availability of income-forecast method to depreciation of manuscript creation costs not because of difficulty in estimating future income stream before book's publishing, but rather because such a holding comports with Congress's intent).

169. *Supra* notes 158–159 and accompanying text.

170. See Prop. Treas. Reg. § 1.167(n)-6, 67 Fed. Reg. 38025-01 (May 31, 2002). Under the look-back rules, taxpayers using the income-forecast method are required to pay, or are entitled to receive, interest computed under the look-back method for any year to which the look-back requirement applies (recomputation year). *Id.* Interest may arise if either forecasted total income or revised forecasted total income is overestimated or underestimated. Taxpayers are required to pay look-back interest if deductions are accelerated due to the underestimation of total income expected to be earned with respect to the property. Conversely, taxpayers are entitled to receive look-back interest if deductions are delayed as a result of overestimating total income expected to be earned with respect to the property. *Id.* For the series of computations required to determine look-back interest that a taxpayer is either required to pay or is entitled to receive, see *id.* § 1.167(n)-6(b), -6(d).

provide an arbitrary recovery period to avoid messy valuation and intangible asset allocation problems. However, a patent acquired as part of the purchase of a trade or business does not necessarily derive its value from the goodwill and reputation of the business with which it is associated.¹⁷¹ Patents can be freely sold, assigned, or transferred without associated goodwill or other business assets.¹⁷² Hence, the depreciation schedule of patents need not necessarily parallel the arbitrary depreciation schedule applicable to all intangibles acquired in a business acquisition, such as trademarks and trade names, which lack inherent value.

Another puzzling distinction under the current depreciation regime for innovation acquisitions relates to the treatment of contingent payments.¹⁷³ Contingent payments made for an innovation acquired with a business are treated vastly different from contingent payments made for an innovation acquired separately. If a contingent payment is made for innovation acquired with a business, the contingent amount is depreciated ratably over the remainder of the fifteen-year period.¹⁷⁴ If a contingent payment is made for innovation acquired separately, then the contingent amount is fully deductible in the year paid.¹⁷⁵ The apparent rationale

171. Trademarks, in part, derive their value from good will, which is the value of a business beyond that inherent in its tangible assets. See 1 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION §§ 2:18–19 (4th ed. 2007) (citing *Mutual Life Ins. Co. v. Menin*, 115 F.2d 975 (2d Cir. 1940) (explaining that goodwill encompasses all of the qualities that attract customers to a business), *cert. denied*, 313 U.S. 578 (1941)). The value of patents, however, stems from the owner's ability to "exclude others from making, using, selling, or offering for sale the invention within the United States" for a set number of years. See 5 DONALD S. CHISUM, CHISUM ON PATENTS § 16.01 (2004).

172. See, e.g., *Zenith Radio Corp. v. Hazeltine Research, Inc.*, 395 U.S. 100, 135 (1969) (citing *Waterman v. Mackenzie*, 138 U.S. 252, 255 (1891)) ("The law . . . recognizes that [the patent holder] may assign to another his patent, in whole or in part, and may license others to practice his invention.").

173. The adjusted basis of an acquired innovation that is a § 197 intangible does not include any portion of the purchase price that is contingent. Rather, the adjusted basis is increased only when the contingency is satisfied. See Treas. Reg. § 1.197-2(f)(2)(iii) (referencing the rules of I.R.C. §§ 461, 483, and 1275 to determine when and how much of a contingent payment is properly included in cost basis).

174. *Id.* § 1.197-2(f)(2)(i). According to the legislative history:

[I]f a portion of the cost of acquiring an amortizable section 197 intangible is contingent, the adjusted basis of the section 197 intangible is to be increased as of the beginning of the month that the contingent amount is paid or incurred. This additional amount is to be amortized ratably over the remaining months in the . . . amortization period that applies to the intangible as of the beginning of the month that the contingent amount is paid or incurred.

H.R. REP. NO. 103-213, at 685 (1993), as reprinted in 1993 U.S.C.C.A.N. 1088, 1374.

175. Under this approach, known as the "variable contingent payment" method of depreciation, a taxpayer adds the amount of the contingent payments to the basis

behind permitting an immediate deduction for each year's contingent payment for separately acquired innovation is that each payment reflects the annual cost of the innovation and that a current deduction properly matches expenses with income.¹⁷⁶ Should not the same policy rationale be used to support current deductions for all contingent payments, regardless of whether the patent is acquired separately or with a trade or business? Any concerns about valuing intangibles acquired in a business acquisition or about allocating the purchase price among acquired intangibles—concerns purportedly addressed by § 197—are nonexistent when contingent payments are planned.

In sum, the current tax regime governing innovations fails to adequately encourage development and acquisitions of innovations. The government should explore new tax incentives that recognize the major shift in the innovation market toward a segmentation model where research universities and small companies are the epicenters of ideas, complementing and maximizing the innovations of large and established companies with strong marketing and distribution forces. Segmentation of innovation allows new ideas to develop at a faster pace, fostering strong competition and leading to a robust acquisition market, and, therefore should be encouraged.

IV. EXPLORING ACCELERATED TAX INCENTIVES FOR INNOVATION ACQUISITIONS

The segmentation of the innovation market demonstrates that corporations today cannot internally develop all innovations with immediate commercialization potential.¹⁷⁷ Small companies and universities are the incubation centers of new innovations and serve

of the patent and then immediately takes a depreciation deduction for an equal amount. The government has sanctioned the variable contingent payment method. See Treas. Reg. § 1.167(a)-14(c)(4) (describing the basis of a patent as either depreciated ratably over its useful life or under the income forecast method); see also *Associated Patentees, Inc. v. Comm'r*, 4 T.C. 979, 985-87 (1945), *acq.*, 1959-2 C.B. 3 (sanctioning deduction for variable contingent payments); Rev. Rule 67-136, 1967-1 C.B. 58 (agreeing to following the *Associated Patentees* decision); *Allied Tube & Conduit Corp. v. Comm'r*, 34 T.C.M. (CCH) 1218 (1975) (recognizing that deducting yearly payments on a patent is a reasonable method of depreciation).

176. See *Associated Patentees*, 4 T.C. at 986 (concluding that a current deduction for the entire contingent payment gives the taxpayer "a reasonable, and not more than a reasonable," depreciation allowance, whereas permitting as depreciation only a proportionate part of the payment "might deny the recovery of [the taxpayer's] cost and would unquestionably result in a distortion of income").

177. See Parchomovsky & Wagner, *supra* note 42, at 10 (asserting that, in reaction to the increasing market dominance of large corporations, an increase in segmentation of innovations will occur and startups and small companies will remain in the market by complementing the innovation portfolios of big companies).

the important niche of supplying innovations to large corporations.¹⁷⁸ Thus, the acquisition of innovations at various stages should be encouraged through tax policy.

Unfortunately, current tax incentives are aimed at the innovation development market only.¹⁷⁹ There is a deduction available to individual and corporate inventors for otherwise capitalized development costs,¹⁸⁰ and there is a limited guarantee of preferential tax treatment to individual inventors on later sales of resultant innovations.¹⁸¹ But both incentives are limited in application and both apply only to developers. This regime reflects the old focus on the development market and does not reflect the reality of the new acquisition market, that is to say, segmentation and licensing. It is time to explore an appropriate regime that reflects the reality of the segmentation of the innovation market—a system that encourages a robust acquisition market.

One intended purpose of allowing a deduction for capital research and experimental expenditures was to encourage new research activity and thus stimulate technological development and economic growth.¹⁸² While current tax law attempts to encourage research and experimentation, it does not adequately incentivize acquisitions of research efforts by third parties for further experimentation and product development. To achieve optimal innovation outcomes and enhanced economic growth, the federal subsidization of research activities should not be limited to initial research and experimentation, but should be extended to encourage desirable innovation acquisitions. One potential option would be to provide an immediate deduction for certain innovation acquisition costs.¹⁸³

178. See generally Michael J. Kennedy, *Technology and Emerging Growth Acquisitions: The Private Perspective*, in MICHAEL J. KENNEDY, *HANDLING HIGH-TECH M&AS IN A COOLING MARKET: ENSURING THAT YOU GET VALUE* 921, 923–25 (2001) (discussing the flexibility associated with deals between private and public companies).

179. Specifically, §§ 41, 174, and 1235 of the Code are directed toward innovation developers. See *supra* Part III.A (describing the preferential tax treatment associated with innovation development and transfer).

180. See *supra* notes 102–105 and accompanying text (outlining the various ways in which the Code encourages research and development). The Code also encourages development growth by providing a credit to developers who increase their research efforts from one year to the next. See I.R.C. § 41 (granting research credit based on percentage of qualified research costs).

181. See *supra* notes 106–112 and accompanying text (outlining the flexibility of capital gains treatment for income associated with patent sales).

182. See *supra* note 105 (explaining that tax incentives encourage research by providing immediate deductions and providing investors with benefits even when the research does not result in a viable innovation).

183. See *infra* Part IV.A (arguing that allowing immediate deductions for innovation acquisitions would encourage such acquisitions as well as spur investment).

Another option would be to design an optimal depreciation system for otherwise capitalized innovation acquisition costs that would incentivize desirable innovation acquisitions.¹⁸⁴ These options are explored below.

A. Allowing Immediate Expensing of Costs of Acquisitions for Further Development and Licensing, but not Offensive Use

A company desiring to acquire innovations developed by other entities may either purchase stock from the third party developing the innovative technologies or purchase innovation assets separately.¹⁸⁵ Immediate expensing of (or even depreciation allowances for) stock purchase costs is unrealistic, as the government has never been willing to depart from the general capitalization rule with respect to stock purchases or to allow depreciation deductions for capitalized stock purchase costs.¹⁸⁶ Immediate expensing of direct

184. See *infra* Part IV.B (discussing the potential use of ex ante rules for acquired innovation depreciation).

185. An acquiring company could also engage in a tax-free merger with the target start-up company, issuing its own stock, as opposed to cash, to shareholders of the target corporation. See I.R.C. § 368 (defining various types of corporate reorganizations for tax purposes). In practice, however, taxable stock acquisitions in which target shareholders emerge with cash are more common.

186. The costs of purchasing stock must be capitalized. I.R.C. § 263. And, capitalized stock purchase costs are not depreciable under either § 197 or § 167. I.R.C. § 197(e)(1)(A) (providing stock in a corporation is not a § 197 intangible); Treas. Reg. § 1.167(a)-1 (as amended 1972); Treas. Reg. § 1.167(a)-3 (as amended 2003). Note that there is a special rule whereby a stock purchase will be treated as a direct asset purchase, entitling the acquirer to depreciation allowances. More specifically, if the requirements of § 338 are satisfied and if a proper election is made under that section, a “qualified stock purchase” will be treated as a transaction involving the acquisition of assets constituting a trade or business (“deemed asset purchase”). I.R.C. § 338; Treas. Reg. § 1.197-2(e)(5). Such a purchase will only be treated as a deemed asset purchase if the direct acquisition of the assets of the corporation could have been treated as the acquisition of assets constituting a trade or business. I.R.C. § 338; Treas. Reg. § 1.197-2(e)(5). However, if a taxpayer purchases stock in a company having substantial innovations but does not make a § 338 election, the taxpayer cannot depreciate the purchase costs because stock is not a § 197 intangible. I.R.C. § 197(e)(1)(A). In other words, if a taxpayer makes a § 338 election, the stock purchase will be treated as a purchase of the company’s innovation assets, the costs of which can be amortized over fifteen years. See *id.* § 197(a) (entitling a taxpayer who purchases a § 197 intangible to a deduction calculated by amortizing the adjusted basis of the intangible ratably over a fifteen-year period). The quid pro quo for obtaining fifteen-year amortization in a stock purchase is that the IRS then treats the target as if it had sold its innovation holdings, which may result in taxable gain. Specifically, in a § 338 qualified stock purchase, the target corporation is deemed to have engaged in two significant transactions. First, the IRS treats the target corporation as if it had sold all of its assets in a single transaction at fair market value at the close of the acquisition date (“deemed sale”). I.R.C. § 338(a)(1). Second, the IRS treats the target corporation as a new corporation that purchased, or reacquired, all of the assets the day following the sale (“deemed purchase”). *Id.* § 338(a)(2). This deemed purchase of the assets effectively establishes a cost basis in the target corporation’s assets. As a result, the

innovation purchase costs, however, should be explored, at least where consistent with the historical treatment of tangible asset acquisition costs.

Since 1981, the government has permitted business taxpayers to elect to deduct immediately the cost of purchasing certain tangible property that would otherwise have to be capitalized and depreciated over a depreciation schedule.¹⁸⁷ More specifically, § 179 of the Code allows taxpayers to deduct the cost of any “§ 179 property” in the year in which the property is placed in service, provided certain conditions are met.¹⁸⁸ To restrict the benefit to relatively small firms with moderate investments in qualified assets, the Code establishes two limitations on the amount that may be deducted: (1) the total cost deducted may not be more than \$125,000,¹⁸⁹ and (2) the amount deducted may not exceed the aggregate income of the taxpayer for the tax year in question.¹⁹⁰

As mentioned above, the type of property to which the election applies is “section 179 property.”¹⁹¹ Section 179 property is generally tangible, depreciable, personal property—as opposed to real property—that is acquired for use in the *active conduct of a trade or business*.¹⁹² Common examples of qualified property include business machines and equipment, transportation equipment, and communications equipment.¹⁹³ As a result of the Jobs and Growth Tax Relief and Reconciliation Act of 2003, off-the-shelf computer

tax consequences of a stock acquisition under § 338 will parallel the tax consequences of a direct asset acquisition.

187. See I.R.C. § 179 (defining § 179 property as depreciable, tangible, personal property and off-the-shelf computer software that is purchased for conducting a trade or business and that satisfies other I.R.C. requirements).

188. See *id.* § 179(a) (permitting taxpayers to treat the cost of such property as an expense not chargeable to a capital account and to deduct the expense for the tax year in which the property is placed in service).

189. The dollar limitation amount applies to tax years from 2006 to 2011. *Id.* § 179(b)(1). This allowance amount is indexed for inflation. The amount is reduced dollar-for-dollar, not below zero, by the amount by which the cost of the qualifying property in service during the tax year exceeds \$500,000. *Id.* § 179(b)(2). This allowance amount is also indexed for inflation.

190. *Id.* § 179(b)(3).

191. *Id.* § 179(a).

192. *Id.* § 179(d)(1).

193. Section 179 specifies that qualifying property is depreciable tangible property used in the active conduct of a trade or business, but it must satisfy the requirements of § 1245(a)(3), which excludes most buildings and their structural components. See *id.* § 179(d)(1); I.R.C. § 1245(a)(3)(B); see also GARY GUENTHER, CONG. RESEARCH SERV., SMALL BUSINESS EXPENSING ALLOWANCE: CURRENT STATUS, LEGISLATIVE PROPOSALS, AND ECONOMIC EFFECTS 2 (2005) (pointing out that research and bulk storage facilities may be qualified property even though most buildings are not).

software was added to the list of “section 179 property.”¹⁹⁴ Other than readily available software, intangible property has never been included in the definition. As a result, innovation acquisition costs have never been eligible for the small business expensing allowance.

Expanding the expense allowance to certain innovation acquisition costs would represent a significant tax subsidy for innovation investment and achieve other important goals. Chiefly, it would lower the cost of capital for innovations used in an active trade or business, which would reduce the tax burden on innovation acquirers and stimulate business investment and the economy. Policymakers had these goals in mind when they enacted special expensing for tangible property,¹⁹⁵ and such objectives are equally applicable with respect to intangible innovations.

Expanding the expense allowance for limited acquisition costs would also serve to eliminate high administrative costs and reduce the harm caused by current irrational tax depreciation rules. It has been argued that capitalization of costs is warranted only if followed by rational depreciation rules.¹⁹⁶ As explained earlier, current depreciation rules for innovation acquisitions adopt a host of arbitrary methods and recovery periods.¹⁹⁷ Certain innovation acquisition costs are grouped and depreciated according to an arbitrary fifteen-year schedule—regardless of their legal or useful life.¹⁹⁸ Meanwhile, other innovation costs are depreciated according to an asset-specific schedule—either useful life or as income is earned.¹⁹⁹ This system is far from rational, and multiple commentators have pointed to flaws with similar approaches, supporting the argument that capitalization is not necessarily justified.²⁰⁰

194. See Jobs and Growth Tax Relief Reconciliation Act of 2003, Pub. L. No. 108-27, § 202(b), 117 Stat. 752, 757 (2003) (codified as amended at I.R.C. § 179(d)(1)(A)(ii)); see also GUENTHER, *supra* note 193, at 2–3 (considering the limitations of expensing allowances and the procedures for recovering the costs of qualified property).

195. See GUENTHER, *supra* note 193, at 3–5 (weighing the costs and benefits of expensing for small businesses).

196. See Yale, *supra* note 13, at 557–64 (arguing that flawed depreciation schedules may justify departure from normative capitalization but only in limited cases; otherwise, expensing may be a preferable neutrality-enhancing policy choice).

197. See *supra* notes 144–162 (discussing complex depreciation deduction methods and related statutory provisions).

198. See *supra* notes 144–151, 163–165 and accompanying text (describing and criticizing the current depreciation regime for innovations acquired with a business).

199. See *supra* notes 152–160, 166–170 and accompanying text (describing and criticizing the current depreciation regime for separately acquired innovations).

200. Some commentators have argued that expensing makes sense when there is no reason to expect that capitalization and depreciation will promote efficiency. See, e.g., John W. Lee, *Transaction Costs Relating to Acquisition or Enhancement of Intangible*

An expensing option, however, should only be available to innovations acquired for future development or licensing, and not to innovations acquired for offensive use purposes.²⁰¹ The current § 179 expense provision applies only to tangible property “acquired by purchase for use in the active conduct of a trade or business.”²⁰² If the expense allowance is expanded to cover innovation acquisitions, it should similarly apply to innovations acquired for *active use* in a trade or business. Acquisition for licensing purposes should be considered active use in a trade or business.²⁰³ Acquisition for offensive use purposes, however, should not.

Offensive use of patent portfolios is typically perpetrated by a company without the capacity to generate more innovation.²⁰⁴ The company is generally not in the business of further research and development, but rather the company is a shell that holds the patents for litigation purposes.²⁰⁵ In fact, commentators have noted that the use of patent portfolios to threaten others through litigation hinders innovation instead of generating it.²⁰⁶ Patent litigation is prohibitively

Property: A Populist, Political, but Practical Perspective, 22 VA. TAX REV. 273, 345 n.349, 350–52 (2002) (arguing that capitalization followed by slow or no depreciation distorts economic depreciation and urging that the “second best approach” of allowing costs that should be capitalized to be deducted immediately “is demanded by clear reflection of income as a rule of equity or rough justice”); Yale, *supra* note 13, at 557 n.39 (“In the absence of a feasible method of amortizing costs . . . , a current deduction may be preferable to capitalization as a method of clearly reflecting income.” (quoting Alan Gunn, *The Requirement That a Capital Expenditure Create or Enhance an Asset*, 15 B.C. INDUS. & COM. L. REV. 443, 492–93 (1974))); Case Comment, *An Analysis of INDOPCO, Inc. v. Commissioner*, 54 OHIO ST. L.J. 1505, 1516–19 (1993) (arguing that determinations of whether expenditures should be treated as capital expenditures should turn on whether current deductibility results in distortion of income).

201. See *supra* Part II.B (describing the practice of acquiring innovations for offensive use purposes).

202. I.R.C. § 179(d)(1)(C).

203. In licensing software and technology, the license itself is the product the producer offers to its customers. See generally Gomulkiewicz, *supra* note 100, at 895–99 (arguing that, though the computer software provides functionality to consumers, the functionality is worthless without the accompanying license granting use rights).

204. See Jason Ratanen, *Slaying the Troll: Litigation as an Effective Strategy Against Patent Threats*, 23 SANTA CLARA COMPUTER & HIGH TECH. L.J. 159, 160 (2006) (noting that patent holding companies threaten the market because they “neither develop new technologies nor participate directly in the market, but instead acquire patent rights solely for the purpose of obtaining a revenue stream.”).

205. See generally Katherine E. White, *Preserving the Patent Process to Incentivize Innovation in Global Economy*, 2006 SYRACUSE SCI. & TECH. L. REP. 1, 1 (2006), <http://www.law.syr.edu/students/publications/sstlr/framesets/archive/current/currentset.htm> (noting that patent holding companies are “patent trolls”—entities that buy patents and enforce them without any intent to produce a product).

206. Commentators have ventured so far as to call patent holding companies “terrorists” that “threaten legitimate innovators and producers.” Amy L. Landers, *Let the Games Begin: Incentives to Innovation in the New Economy of Intellectual Property*

costly, particularly in the software industry, in which a single piece of software may touch on many patents belonging to others, increasing the risk of patent infringements and the possibility of injunction.²⁰⁷ Offensive use of patents has been accordingly denounced in the software industry and others.

B. Setting Rational Economic Depreciation Rules that Would Encourage Desirable Innovation Acquisitions

If the government is unwilling to depart from normative capitalization and permit immediate expensing of certain innovation acquisition costs, as it has done with certain tangible property, then it should consider designing new ex ante depreciation rules for acquired innovation.²⁰⁸ An ideal depreciation system would incentivize desirable innovation acquisitions, lower compliance and administrative costs, and measure income with sufficient accuracy.

When designing such a system, a decision would have to be made about whether to establish a grouping system for innovations—the current approach for all tangible property²⁰⁹ and intangible property acquired with a business²¹⁰—or to establish an asset-by-asset system, which is the current approach for intangible property acquired separately.²¹¹ Ideally, the system would not be a combination of the two as under current law. A grouping system would be more administrable than an asset-by-asset depreciation system for

Law, 46 SANTA CLARA L. REV. 307, 346 (2006) (quoting Jason Schultz, *When Dot-Com Patents Go Bad*, SALON.COM, Dec. 13, 2004, http://www.salon.com/tech/feature/2004/12/13/patent_reform/).

207. See *Amendment in the Nature of a Substitute to H.R. 2795, The "Patent Act of 2005": Hearing Before the Subcomm. on Courts, the Internet and Intellectual Property of the Comm. on the Judiciary*, 109th Cong. 7 (2005) (statement of Emery Simon, Counselor, Business Software Alliance) ("Today, hundreds of patent infringement cases are pending against computer software and hardware companies, costing the industry hundreds of millions of dollars each year. . . . Our industry is particularly vulnerable to such claims because our complex products often have hundreds of patented or patentable features contained within them.").

208. The depreciation rules would apply to capitalized innovation acquisition costs and not stock purchase costs. The Code has a mechanism that treats a stock purchase as a direct asset purchase. See *supra* note 186 and accompanying text (discussing how a qualified stock purchase may be treated as a "deemed asset purchase" under § 338); see also Matthew A. Melone, *Taxable Corporate Acquisitions: A Primer for Business & the Non-Specialist*, 25 U. TOL. L. REV. 673, 677–78, 697–703 (1994) (explaining the application and benefits of making a § 338 election). If such a mechanism was utilized, the purchase costs could enjoy the benefits of the depreciation rules recommended here.

209. See I.R.C. § 168 (listing various depreciation methods according to type of property).

210. See *supra* notes 144–151, 163–165 and accompanying text (explaining how grouping system applies to certain acquired innovations).

211. See *supra* notes 152–160, 166–170 and accompanying text (explaining how an asset-by-asset approach applies to certain acquired innovations).

innovation acquisitions. But could a grouping system for innovation capital be designed to measure income accurately? While grouping all innovations into a single class with a set recovery period may not achieve that goal, breaking down innovation into subclasses each with their own depreciation schedule might.²¹²

A grouping system currently exists for all depreciable tangible property. Under § 168 of the Code, enacted in 1981, most depreciable, tangible, personal property is grouped into one of six classes with arbitrary recovery periods of either 3, 5, 7, 10, 15, or 20 years.²¹³ Under this system, for example, computers are classified as five-year property and are depreciated over five years.²¹⁴ The grouping system for tangible property was enacted to alleviate some of the problems caused by an asset-by-asset approach—namely the burden of having to determine the useful life of each tangible asset and of settling disputes between taxpayers and the government over useful life determinations. Whether a tangible asset is categorized as three-year property or five-year property, etc. depends on the asset's "class life," which the government has determined according to industry standards for most forms of tangible property.²¹⁵

212. *But see* Yale, *supra* note 13, at 569–72 (arguing that “a grouping system that is both administrable and sufficiently accurate is an attainable goal for tangible assets” but “would be more problematic for intangible capital” because intangible capital is difficult to categorize).

213. I.R.C. § 168(c). Water utility property is placed into its own class and is recovered over an arbitrary 25 years. Depreciable real property is grouped separately as well, and is recovered over either 27.5 years (residential apartment buildings) or 39 years (commercial buildings and warehouses). Section 168 was added to the Code by the Economic Recovery Tax Act of 1981, Pub. L. No. 97-34, § 201(a), 95 Stat. 172, 203-19 (1981).

214. I.R.C. § 168(c), (e). To find a tangible asset's applicable grouping (and, hence, recovery period), one must generally look to § 168(c), § 168(e), and Revenue Procedure 87-56, 1987-2 C.B. 674. Section 168(c) provides a table of applicable recovery periods with reference to the classification of property. Section 168(e) then provides the classification of property with reference to the “class life” of property. Finally, Revenue Procedure 87-56 sets forth the class lives of various tangible assets. Assume, for example, that a taxpayer purchases a large copier to use in her business. According to Revenue Procedure 87-56, the copier has a class life of six years. *See* Rev. Proc. 87-56, 1987-2 C.B. 674 § 5 (prescribing class life for computer or peripheral equipment installed at a business). According to § 168(e), property with a class life of six years is treated as “5-year” property. *See* I.R.C. § 168(e) (classifying property with a class life of more than four but less than ten years as “5-year” property). And, according to § 168(c), five-year property has an applicable recovery period of five years. It should be noted that § 168(e) provides the classification of certain property, making reference to Revenue Procedure 87-56 unnecessary in many cases. For example, § 168(e)(3)(B) provides that five-year property includes computers and light general purpose trucks. Seven-year property includes any property that does not have a class life, among other types of property. I.R.C. § 168(e)(3)(C).

215. *See supra* note 214. Prior to the enactment of § 168 in 1981, the primary method used to ascertain the useful life for tangible property was the Asset Depreciation Range (ADR) system. *See* Revenue Act of 1971, Pub. L. No. 92-178,

Accordingly, an effort has been made to achieve some correlation between the prescribed groupings and the actual economic useful lives of tangible assets.²¹⁶

But the correlation between tax depreciation and economic depreciation is not perfect for tangible property, and purposefully so. For tangible property, the government designed a system that is "accelerated." Many of the recovery periods for depreciable tangible property are shorter for tax purposes than for economic purposes.²¹⁷ This means that purchasers of tangible property recover their costs more quickly than economic reality would dictate. Moreover, front-loading of depreciation deductions for many types of tangible property is permitted, accelerating the largest part of deductions to the earliest years of an asset's applicable recovery period.²¹⁸

For acquired innovation, short recovery periods, such as three or five years would incentivize investment in innovation capital. Short recovery periods would also recognize the relatively risky nature of innovation compared to other intangible assets. Risk, such as

§ 109, 85 Stat. 497, 508–10 (1971) (providing that class life is an allowance determined by the Secretary of the Treasury or a delegate based on a reasonable estimation of the anticipated useful life of the property). Under the ADR system, effective for tangible assets placed in service after 1970 and before 1981, tangible assets "were grouped into more than 100 classes, and a guideline life for each class was determined by the Treasury. Taxpayers could claim a useful life up to twenty percent longer or shorter than the ADR guideline life." STAFF OF JOINT COMM. ON TAXATION, 97TH CONG., GENERAL EXPLANATION OF THE ECONOMIC RECOVERY TAX ACT OF 1981 67 (Comm. Print 1981). The ADR system did not resolve all problems, and § 168 was enacted in response, grouping tangible assets according to each asset's class life. An asset's class life is the midpoint life in the original ADR. Rev. Proc. 87-56, 1987-2 C.B. 674.

216. Professor Jeff Strnad describes these efforts:

The current tax depreciation treatment of [tangible] assets depends heavily on their class lives. . . . Not surprisingly, the Treasury Department's ultimate goal in studying depreciation for each asset is to determine an appropriate class life for the asset. In particular, Congress has mandated that the Treasury Department study the actual depreciation history of assets so that Treasury might propose revisions to existing class lives and might propose class lives for assets that currently have none. The legislative history concerning this mandate includes the following directive to Treasury about how class lives are to be calculated: "Class lives . . . [should] be determined such that the present value of straight-line depreciation deductions over the class life, discounted at an appropriate real rate of interest, is equal to the present value of what the estimated decline in value of the asset would be in the absence of inflation." Treasury has termed the class life that emerges from this type of calculation the "equivalent economic life" of the asset.

Tax Depreciation and Risk, 52 SMU L. REV. 547, 567 (1999) (quoting STAFF OF JOINT COMM. ON TAXATION, 99TH CONG., GENERAL EXPLANATION OF THE TAX REFORM ACT OF 1986, H.R. REP. NO. 99-841, at 103 (1986) (Conf. Rep.)).

217. See I.R.C. § 168(c), (e) (classifying, for example, property with a class life of more than five year but less than ten years as five-year property).

218. See I.R.C. § 168(b) (prescribing depreciation methods according to type of property).

retirement risk and revenue risk, “can have a significant impact on the optimal design of depreciation rules.”²¹⁹ As some economists have argued, “depreciation schedules for relatively risky assets should be accelerated to compensate the owners of such assets for bearing a disproportionately large share of the capital price risk.”²²⁰ It is often difficult to determine whether certain acquired innovation will produce benefits and, if so, how long benefits will last.²²¹ For example, if a purchaser acquires innovation at an early stage when patent applications for the innovation are pending, the purchaser cannot be certain about whether all of the patent applications will mature to patents.²²² In addition, even after the purchaser receives the patents, there is always a fear that the patents may be invalidated subsequently by a third party.²²³

One might try to argue that longer recovery periods are justified due to the fact that current ex post adjustments are available to innovation owners upon later sale or retirement of purchased innovations. It is true that innovation owners may take a tax loss deduction on either the sale or retirement of innovations. The deductible amount on sale is the excess of the adjusted basis in the innovation over the amount realized in the trade,²²⁴ and the deductible amount on retirement or obsolescence is the unrecovered adjusted basis in the innovation.²²⁵ But ex ante slow depreciation

219. See Strnad, *supra* note 216, at 547–48 (noting that “retirement risk *must* be taken into account in designing an accelerated schedule that does not favor some assets over others”).

220. Yale, *supra* note 13, at 572 (citing Jeremy I. Bulow & Lawrence H. Summers, *The Taxation of Risky Assets*, 92 J. POL. ECON. 20, 37–38 (1984)); see Roger H. Gordon & John Douglas Wilson, *Measuring the Efficiency Cost of Taxing Risky Capital Income*, 79 AM. ECON. REV. 427, 438 (1989).

221. See generally *Ill. Tool Works, Inc. v. Comm’r*, 355 F.3d 997, 998 (7th Cir. 2004) (holding that the purchaser of a patent subject to a large judgment rendered in a patent infringement case pending at the time of purchase has no right to deduct the cost as a business expense).

222. See, e.g., *Meehan v. PPG Indus.*, 802 F.2d 881, 885–86 (7th Cir. 1986) (demonstrating that an innovation acquirer risks having a court declare that the transaction between the acquirer and the seller was illegal). In *Meehan*, the plaintiff had patent applications pending, subject to an exclusive licensing arrangement, and also expected patents to be issued in a number of countries. *Id.* at 882. The Seventh Circuit held that the agreement was illegal per se because the agreement, in anticipation of patent protection, extended the grant beyond the legal life of the patent. *Id.* at 885–86.

223. See Sharon A. Israel & Jason W. Cook, *Preparing Patent Invalidation Opinions*, in PREPARING PATENT LEGAL OPINIONS 169, 193 (2002) (stating that ultimately invalidity opinion letters must determine whether the patent at issue is invalid based on grounds such as “anticipation under 35 U.S.C. § 102, obviousness under 35 U.S.C. § 103, or a violation of the requirements of 35 U.S.C. § 112 (best mode, enablement, written description, definiteness)”).

224. I.R.C. § 1001.

225. *Id.*; I.R.C. § 165.

schedules (long recovery periods) with substantial ex post adjustments are not necessarily favored over ex ante accelerated depreciation schedules (short recovery periods) with fewer ex post adjustments. As noted by one commentator, “an accelerated depreciation system . . . reduces strategic loss-taking. Under an accelerated schedule adjusted basis is lower at any given point in time. It is less likely that adjusted basis will ever exceed market value by enough to make strategic loss-taking profitable net of trading costs.”²²⁶

In sum, as an alternative to expensing, tax policy makers could consider creating arbitrary depreciation conventions and methods for recovering capitalized costs of acquiring innovation and, more importantly, provide artificially low recovery periods (three-, five-, and seven-year recovery periods). Congress has already taken this approach for at least two forms of acquired intellectual property: computer software and copyrights on musical works. In 1993, Congress created an arbitrary three-year depreciation period for capitalized costs of separately acquired software (software that is not acquired as part of the purchase of a trade or business).²²⁷ In 2005, Congress created a special depreciation rule for musical compositions and copyrights on musical works.²²⁸ Under this new rule, taxpayers may elect to depreciate the costs of acquiring “applicable musical property” over five years in lieu of amortizing the costs under the income forecast method.²²⁹ The term “applicable musical property” means any musical composition (including any accompanying words), or any copyright with respect to a musical composition.²³⁰ These new rules have the benefit of encouraging

226. Strnad, *supra* note 216, at 597.

227. See I.R.C. § 197(e)(3)(A); Treas. Reg. § 1.197-2(c)(4) (excluding computer software readily available to the general public); see also I.R.C. § 167(f) (incorporating definition of computer software from § 197(e)(3)(B)); Treas. Reg. § 1.167(a)-14(b) (explaining how to determine the deduction amount for computer software).

228. I.R.C. § 167(g)(8).

229. *Id.* § 167(g)(8)(A) (as amended by the Tax Increase Prevention and Reconciliation Act of 2005, Pub. L. No. 109-222, 120 Stat. 345 (codified as amended in scattered sections of 26 U.S.C.)). Under § 167(g)(8)(A), if an election is in effect, then any expense paid or incurred by the taxpayer in acquiring qualified musical property that is placed in service during the taxable year may be amortized ratably over the five-year period beginning the month that the property was placed in service. *Id.* The Treasury Department is responsible for prescribing the time and form of election; the election applies to any applicable musical property placed in service during the taxable year the election is made. *Id.* § 167(g)(8)(D).

230. *Id.* § 167(g)(8)(c). This special depreciation rule for musical works applies with respect to property placed in service in taxable years beginning after December 31, 2005; an election may not be made for any tax year beginning after December 31, 2010. *Id.*

investment in computer software and musical compositions. In addition, the new rules simplify tax accounting and minimize the cost of tax compliance. Similar goals could be achieved with capitalized innovation acquisition costs.

CONCLUSION

A robust innovation acquisition market fosters desirable innovation development at the lower strata, comprised mostly of small entities and research universities. Accordingly, it is important to have sound tax rules that encourage acquisitions of innovation for societal good and, at the same time, achieve important tax policy goals such as efficiency and administrability. There are several ways in which to incentivize desirable acquisitions. Tax breaks are currently offered to inventors and other transferors of innovation. Adequate economic tax incentives also could be offered to innovation purchasers to achieve optimal innovation outcomes and enhanced economic growth. Any incentives, however, should not apply to acquisitions of innovation for offensive use purposes, because they would only serve to hinder further innovation.