

# **TREATING THE LEGAL SIDE EFFECTS OF CIPRO®: A REEVALUATION OF COMPENSATION RULES FOR GOVERNMENT TAKINGS OF PATENT RIGHTS**

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## **I. INTRODUCTION**

The United States government's power to appropriate patented inventions and its corresponding responsibilities in doing so is a topic that has traditionally not received a great deal of attention from the academic community or the public at large. Perhaps this is because the incidence of such appropriations has been rather low relative to, say, government appropriations of real property.<sup>1</sup> But since the fall of 2001, a time that has witnessed dramatic changes in various aspects

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<sup>1</sup> For example, the Administrative Office of the U.S. Courts reported that there were 17 patent cases versus 398 property takings cases pending in the U.S. Court of Federal Claims as of September 30, 2000. ADMIN. OFF. OF THE U.S. CTS., ANN. REP. OF THE DIR., Tbl. G-2A (2000).

of the American psyche, this issue has suddenly become a more prominent subject of legal policy debate. In so becoming, it has exposed a lack of substantial jurisprudence on the issue and elicited calls for reevaluation and reform of the patent system itself. The factual background of the crisis that spurred the recent debate is, of course, well-known, but it is useful to reflect on those specific events to clarify the relevance and proper social context of the legal issues.

In October 2001, the United States was faced, for the first time in its history, with a credible and significant threat to its national security from "bioterrorism." An unknown person (or persons) sent a refined form of the bacteria, *Bacillus anthracis* ("anthrax"), through the U.S. mails to several prominent media outlets and members of Congress.<sup>2</sup> The U.S. government immediately took action to administer treatment to those affected by providing them with ciprofloxacin, the only antibiotic approved by the U.S. Food and Drug Administration ("FDA") for the treatment of inhalation anthrax, which is by far the most lethal form of the disease.<sup>3</sup> Ciprofloxacin is manufactured and marketed by the German pharmaceutical company, Bayer, A.G. under the brand name Cipro®.<sup>4</sup> Fortunately, the United States government had stockpiled the drug (which is, in fact, widely prescribed for other indications) in sufficient quantities to meet the needs of those directly or tangentially affected in the days immediately following the first attacks.

As time went on, however, it became apparent that the reach of the attacks was far greater than originally thought. Many members of the public became concerned that the demand for ciprofloxacin would outstrip the supply held by the government. Public attention focused on the fact that Bayer held the essential U.S. patent rights related to ciprofloxacin and had, in effect, the right to exclude all other companies from manufacturing or selling the drug in the United

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<sup>2</sup> See Stephen Engleberg & Judith Miller, *Sign of Escalating Threat*, N.Y. TIMES, Oct. 17, 2001, at A1.

<sup>3</sup> Kathleen Pender, *Cipro Had Big Boost From U.S. / U.S. Tests Led to OK for Anthrax Use*, SAN FRAN. CHRON., Oct. 25, 2001, at D1; Letter from FDA to Bayer approving the use of ciprofloxacin for the treatment of "inhalational anthrax." available at [http://www.fda.gov/cder/foi/nda/2000/19-537S038\\_Cipro\\_Approv.pdf](http://www.fda.gov/cder/foi/nda/2000/19-537S038_Cipro_Approv.pdf) (Aug. 30, 2000).

<sup>4</sup> See Pender, *supra* note 3, at D1.

States.<sup>5</sup> Bayer's capacity to keep up with the dramatic increase in demand for the drug became an issue of such great concern that several prominent politicians, most notably Senator Charles Schumer of New York,<sup>6</sup> called for the U.S. government to "override" Bayer's patents and purchase a generic form of the drug from other companies.<sup>7</sup> Some were less concerned with Bayer's capacity to manufacture the drug than with the premium price it charged for ciprofloxacin; they called on the U.S. government to save taxpayer funds by purchasing all future quantities of the drug from generic manufacturers, who typically offer it at less than a tenth of the cost of Bayer's branded product.<sup>8</sup>

Just as the debate regarding the propriety of such government action was coming to a head, Bayer undertook to diffuse the situation by promising to increase its production of the drug three-fold while significantly reducing the price it charged to the U.S. government.<sup>9</sup> The FDA also eased concern by quickly approving alternative antibiotics for the treatment of certain strains of anthrax (including the strain that was used in the attacks).<sup>10</sup> Though public debate dissipated, many questions were raised in the course of this episode and the answers remain unclear:

<sup>5</sup> In particular, U.S. Pat. No. 4,670,444 (issued June 2, 1987 and entitled "7-amino-1-cyclopropyl-4-oxo-1, 4-dihydro-quinoline-and naphthyridine-3-carboxylic acids and antibacterial agents containing these compounds"). Bayer's patent protection over the compound will expire in December, 2003. *Bayer AG v. Carlsbad Technology, Inc.*, 298 F.3d 1377, 1383 (Fed. Cir. 2002); see also 35 U.S.C. § 154(a)(2) (1994).

<sup>6</sup> See Press Release from U.S. Senator Charles E. Schumer, *Schumer: New Cipro Source Could Dramatically Increase Supply*, available at [http://www.senate.gov/~schumer/state-101601\\_cipro.htm](http://www.senate.gov/~schumer/state-101601_cipro.htm) (Oct. 16, 2001).

<sup>7</sup> Donald G. McNeil, *A Rush for Cipro, and the Global Ripples*, N.Y. TIMES, Oct. 17, 2001, at A1.

<sup>8</sup> See Letter from Ralph Nader and James Love to Department of Health & Human Services Secretary Tommy Thompson, available at <http://www.cptech.org/ip/health/cl/cipro/nadethom10182001.html> (Oct. 18, 2001).

<sup>9</sup> Keith Bradsher, *Bayer Agrees to Charge Government a Lower Price for Anthrax Medicine*, N.Y. TIMES, Oct. 25, 2001, at B8; see also Bayer Press Release, *Bayer, HHS Complete Cipro Agreement; Americans Assured of Ample Supplies of Cipro To Combat War on Bioterrorism*, available at <http://www.news.bayer.com/news/news.nsf/ID/01-0350> (Oct. 25, 2001).

<sup>10</sup> See *Cipro (Ciprofloxacin Hydrochloride) for Inhalation Anthrax: Information on Cipro for Consumers: Questions and Answer*, available at [http://www.fda.gov/cder/drug/infopage/cipro/cipro\\_faq.htm](http://www.fda.gov/cder/drug/infopage/cipro/cipro_faq.htm) (last updated Nov. 14, 2001) (noting that doxycycline and penicillin are indicated for anthrax treatment).

- What is the nature of the authority for the U.S. government to "side-step" a patent holder's right to exclude all others from making, using or selling the patented invention?
- When the U.S. government appropriates a patent for a public purpose, what is the proper measure of compensation to the patent holder?
- Is additional legislation necessary to tweak the system in order to provide stronger government powers over patent property in times of national emergency?

The answers to these questions could have a considerable effect on United States foreign policy with respect to the protection and enforcement of intellectual property interests<sup>11</sup> as well as the United States' ability to prepare for and respond to future terrorist attacks at home.<sup>12</sup> Aside from the flurry of short comments that appeared in the popular press immediately following the attacks, little has been written that discusses the topic of government takings of patent property in detail.<sup>13</sup> Additionally, thorough analysis by the courts is sparse and much of it is dated and arguably out of step with recent changes that have occurred in the fast-paced world of patent jurisprudence (particularly, post-Federal Circuit).<sup>14</sup> Therefore, it is

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<sup>11</sup> See *infra* notes 42-43 and accompanying text.

<sup>12</sup> Antibiotics may be even more useful in combating anthrax infection than originally thought. Doctors found that patients responded to antibiotic treatment even in advanced stages of the disease, contrary to previous medical doctrine. See Lawrence K. Altman & Gina Kolata, *Anthrax Missteps Offer Guide to Fight Next Bioterror Battle*, N.Y. TIMES, Jan. 6, 2002, at A1.

<sup>13</sup> But see David M. Schlitz & Richard J. McGrath, *Patent Infringement Claims Against the United States Government*, 9 FED. CIR. B.J. 351, 365 (2000), which reviews the procedural aspects of "patent infringement" actions against the government and concludes that lost profits should be recoverable in many more cases than most people realize, noting "there are potentially large rewards in meritorious suits against the government, which for the most part have not been pursued." As detailed *infra*, this paper is in agreement with Schlitz & McGrath's basic conclusion but provides additional doctrinal and economic support as to why it is the better view. See also Lionel Marks Lavenue, *Patent Infringement Against the United States and Government Contractors Under 28 U.S.C. § 1498 in the United States Court of Federal Claims*, 2 J. INTELL. PROP. L. 389 (1995) (providing a useful dissection and analysis of the current statutory scheme for actions against the government for patent infringement, but touching only lightly on compensation issues).

<sup>14</sup> The creation of the Federal Circuit is considered a major milestone in the development of U.S. patent law, and many practitioners and academics look at patent jurisprudence antedating the Federal Circuit as suspect until addressed by that court. The Federal Circuit was established in 1982 and has sole jurisdiction over appeals concerning patent infringement litigation and decisions of the U.S. Patent and Trademark Office. Federal

important to consider these issues anew, with one eye on the present state of patent law and the other on the historical groundings of the government's abilities to appropriate private patent rights for the public good.

The first two questions highlighted above will be the subject of in-depth analysis in this paper. The topic of the third question — legislative reformation — will be briefly addressed, but the bulk of the discussion and analysis will be saved for a future paper. More specifically, in Part II of this paper, the historical roots, policy and precedent of government appropriations of patent rights will be reviewed. In Part III, major issues and inconsistencies in the current jurisprudence will be highlighted. In Part IV, a course of action on the part of the courts that will best further the goals of the patent system and adhere to constitutional protections for private property will be recommended and the practical implications of this analysis will be assessed. In Part V, predictions and recommendations for future legislative action will be made.

## II. THE NATURE OF THE RELATIONSHIP BETWEEN THE GOVERNMENT AND PRIVATELY-OWNED<sup>15</sup> PATENTS

Most people have a general appreciation of the fact that one can obtain special recognition in the form of a patent from the U.S.

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Courts Improvement Act of 1981, Pub. L. No. 97-164, 96 Stat. 40 (1982). One of the court's purposes was to provide greater doctrinal stability in the patent system. *Chemical Eng'g Corp. v. Marlo, Inc.*, 754 F.2d 331, 333 (Fed. Cir. 1984). Importantly, the court did not adopt the patent law precedent of the other circuit courts, *South Corp. v. United States*, 690 F.2d 1368, 1370 & n. 2 (Fed. Cir. 1982), and thus, many previously "settled" issues are now open to new interpretation. Since its inception, the Federal Circuit has developed patent law precedent at an accelerated rate, so one must be vigilant in looking to court opinions that may confirm or repudiate popular thinking on a particular issue. See ROBERT L. HARMON, *PATENTS AND THE FEDERAL CIRCUIT* x-xi (4th ed. 1999) (noting that the Federal Circuit produces about three times as many decisions of interest as its predecessor court and finding its record surprisingly prolific); see also Rochelle Dreyfus, *The Federal Circuit: A Case Study in Specialized Courts*, 64 N.Y.U. L. REV. 1, 24-25 (1989) (finding that "the CAFC's jurisprudence reveals that the court has begun to make patent law more accurate, precise, and coherent.").

<sup>15</sup> Patents can also be owned by the federal government. 35 U.S.C. § 207(a) (1994), amended by Act of Nov. 1, 2000, 35 U.S.C.A. § 207(a) (West 2001) ("Each Federal agency is authorized to - (1) apply for, obtain, and maintain patents or other forms of protection in the United States and in foreign countries on inventions in which the Federal Government owns a right, title, or interest . . ."). Obviously, there is no appropriation issue with regard to federal use or licensing of federal patents.

government as a reward for making an invention.<sup>16</sup> However, the system is more complicated than the popular image of the quirky inventor in a basement laboratory who, after years of tinkering, finally comes up with a better mousetrap and submits the idea to the Patent Office for a stamp of approval. In fact, it is not hyperbole to say that the patent system constitutes one of the most complex parts of the American government and legal structure.<sup>17</sup> It is essential to understand the nature of the patent right itself as well as the complex relationship between patentees, the government and the public to effectively analyze a Cipro®-like scenario.

#### *A. Patents Bestow Unique Property Rights*

A patent bestows upon its owner<sup>18</sup> the right to exclude others from making, using, selling, offering to sell or importing the claimed

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<sup>16</sup> This paper's discussion of government appropriations of private patent rights will be restricted to the U.S. system. Although practically every country in the world offers some type of protection for useful inventions, and one would suspect that all recognize the principle of eminent domain to some extent, there are significant differences in their respective laws (and, indeed, their legal systems). See JAY DRATLER, JR., LICENSING OF INTELLECTUAL PROPERTY § 3.03 (2001) ("Many foreign countries have provisions for compulsory licensing in their patent and copyright laws, which are designed to insure that innovation is not neglected or suppressed by private forces within or without their borders."). Therefore, extending this paper's analysis beyond U.S. law would unnecessarily complicate the issues. That is not to say that these issues are not important to other countries. See, e.g., Jason R. Boyarski, et al., *Brazil May Break Patent on AIDS Drug; Debate on Reinterpreting TRIPs Continues*, INTELL. PROP. & TECH. L.J., Nov. 2001, at 31. One should be able to extend the analytical techniques described herein to other countries with sufficiently analogous property systems.

<sup>17</sup> Former Chief Judge of the Federal Circuit, Howard Markey, once remarked that "No institution has done so much for so many with so little public and judicial understanding as the American patent system." See William M. Daley, Remarks in the Howard Markey Lecture Series at John Marshall Law School, available at [http://library.nstu.ru/InfoUSA/uslaweb/topical/econ/ipr/ipr\\_dale.htm](http://library.nstu.ru/InfoUSA/uslaweb/topical/econ/ipr/ipr_dale.htm) (Feb. 9, 2000).

<sup>18</sup> References herein are to a patent's "owner" instead of its "inventor" because, although U.S. patent rights initially vest in the inventor(s), in most cases, patent rights are immediately assigned to another — frequently the employer of the inventor. See *Beech Aircraft Corp. v. EDO Corp.*, 990 F.2d 1237, 1246 (Fed. Cir. 1993) ("At the heart of any ownership analysis lies the question of who first invented the subject matter at issue, because the patent right initially vests in the inventor who may then, barring any restrictions to the contrary, transfer that right to another, and so forth. However, who ultimately possesses ownership rights in that subject matter has no bearing whatsoever on the question of who actually invented that subject matter.").

invention for a period of twenty years after filing.<sup>19</sup> The power to exclude is manifested in the provisions of the Patent Act<sup>20</sup> that detail the acts which constitute infringement<sup>21</sup> and the corresponding remedies.<sup>22</sup> Essentially, a patent confers upon its owner nothing more than the right to sue others to stop infringement<sup>23</sup> and/or collect damages resulting from that infringement.<sup>24</sup> What makes a U.S. patent so powerful is that the right to exclude exists even if the infringing party developed the infringing product independently<sup>25</sup> and without knowledge of the patent.<sup>26</sup> Intent is not an element required for a finding of patent infringement.<sup>27</sup>

The exchange for this valuable grant is the inventor's disclosure of his or her invention, which promotes the progress of the "useful

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<sup>19</sup> 35 U.S.C. §§ 154(a)(2), 271 (1994 & Supp. V 1999). In 1995, the GATT amendments to the Patent Act changed the method of calculating the patent term from seventeen years from issuance of the patent to twenty years from filing of the patent application. Owners who held patents still in force as of 1995 were permitted to choose whichever calculation method would give the longest patent term. *Merck & Co. v. Kessler*, 80 F.3d 1543, 1546 (Fed. Cir. 1996).

<sup>20</sup> The entirety of Title 35 of the U.S. Code is devoted to patents.

<sup>21</sup> A direct infringer is anyone who "without authority makes, uses, offers to sell or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent." 35 U.S.C. § 271(a) (Supp. V 1999). One can also indirectly infringe a patent by inducing another to infringe or contributing to another's infringement. 35 U.S.C. §§ 271(b) & (c) (1994 & Supp. V 1999). *But see infra* Part III.C.

<sup>22</sup> 35 U.S.C. §§ 283-285 (1994 & Supp. V 1999).

<sup>23</sup> 35 U.S.C. § 283 (1994).

<sup>24</sup> 35 U.S.C. § 284 (1994 & Supp. V 1999). The act of invention itself "vests an inventor with a common law or 'natural' right to make, use and sell his or her invention absent conflicting patent rights in others . . ." *Arachnid, Inc. v. Merit Indus., Inc.*, 939 F.2d 1574, 1578 (Fed. Cir. 1991). A patent conveys the additional right to exclude others from making, using, selling or offering to sell the invention. *Id.* (citing *Six Wheel Corp. v. Sterling Motor Truck Co.*, 50 F.2d 568, 571 (9th Cir. 1931)).

<sup>25</sup> However, as a result of the changes enacted by the American Inventor's Protection Act of 1999, Pub. L. No. 106-113, 113 Stat. 1501A552-91 (codified as amended in scattered sections of 35 U.S.C.), a limited exception to this rule exists. One of the provisions of that Act allows the prior invention of a business method to be used as a defense to a claim of infringement of another's patented business method (subject to a number of qualifications). *Id.* at 113 Stat. 1501A555-58 (codified at 35 U.S.C. § 273 (Supp. V 1999)).

<sup>26</sup> See HARMON, *supra* note 14, at 242-43, discussing the fact that, although patent infringement is a tort, it is not an intentional tort.

<sup>27</sup> *Id.*

arts"<sup>28</sup> by: (1) conveying knowledge of state-of-the-art innovations to the public while they are still current, creating an incentive for clever individuals to design around the invention, and thus, generating more innovation in the art;<sup>29</sup> and (2) dedicating the patented invention to the public for general exploitation following the period of exclusivity.<sup>30</sup>

The patents that issue from the U.S. system have been analogized to real property deeds with regard to the description of the scope of subject matter covered: the inventor is obligated to disclose to the public the "metes and bounds" of the invention claimed therein.<sup>31</sup> Of course, the property analogy is more than a convenient description — it is a codified requirement. The Patent Act declares that patents "have the attributes of personal property."<sup>32</sup> That qualification aids in defining the proper perspective for rules regarding patent ownership and transfer.<sup>33</sup>

As with other forms of "intellectual property," patents are intangible property assets — really nothing more than a bundle of rights

<sup>28</sup> U.S. CONST., art. 1, § 8, cl. 8. Promoting innovation has generally been the central goal of patent systems since the Statute of Monopolies was enacted in England many centuries ago. See 21 Jas. I, ch. 3 (1623) (Eng.). It is why the patent system is focused on new, useful and non-obvious creations rather than monetary investment or hard work (which may be protected to a much more limited extent by state trade secret law).

<sup>29</sup> See *Read Corp. v. Portec, Inc.* 970 F.2d 816, 828 (Fed. Cir. 1992) ("We have often noted that one of the benefits of the patent system is the incentive it provides for 'designing around' patented inventions, thus creating new innovations."), *abrogated in part on other grounds*, *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 975 (Fed. Cir. 1995) (en banc).

<sup>30</sup> See *Kearns v. Chrysler Corp.*, 32 F.3d 1541, 1550 (Fed. Cir. 1994) ("An invention claimed in a patent passes into the public domain upon termination of the patent's . . . statutory term.").

<sup>31</sup> See, e.g., *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257 (Fed. Cir. 1989) ("A claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using or selling the protected invention."); but see *In Re Etter*, 756 F.2d 852, 859 n. 7 (Fed. Cir. 1985) ("A patent is not a 'deed,' a term normally used to describe an attribute of real property.").

<sup>32</sup> 35 U.S.C. § 261 (1994); see also *Consol. Fruit Jar Co. v. Wright*, 94 U.S. (4 Otto) 92, 96 (1876) ("A patent for an invention is as much property as a patent for land. The right rests on the same foundation and is surrounded and protected by the same sanctions.").

<sup>33</sup> See comments by noted intellectual property scholar Robert Merges on applying real property rules to intellectual property, Symposium: *Toward a Third Intellectual Property Paradigm: Comments: Of Coase and Intellectual Property*, 94 COLUM. L. REV. 2655, 2655-56 (1994). Professor Merges concludes that rules developed to describe real property interests, e.g., the Coase Theorem, also work well to describe intellectual property rights.



created and defined by the U.S. government.<sup>34</sup> That is to say, the government grants rights of exclusion defined by the outcome of the patent examination process.<sup>35</sup> A unique feature of a property right created and defined by the government (as opposed to another private property owner) is that the government can create rules affecting the scope of future grants without affecting any existing private property rights. This is because patent property rights do not exist or vest until the government creates them by issuing a patent.<sup>36</sup> In setting the rules for the issuance of a patent, Congress can define the right as broadly or narrowly as it wishes.<sup>37</sup> For example, if Congress were to prospectively curtail patent rights by limiting the term of enforceability to ten years instead of twenty, that is nothing more than granting a more limited property interest, in the same way

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<sup>34</sup> *Etter*, 756 F.2d at 859.

<sup>35</sup> The Patent Act broadly defines the inventions patentable and sets forth the basic requirements for a patent. *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980) ("Congress intended statutory subject matter to 'include anything under the sun that is made by man.'") (quoting S. REP. NO. 1979, 82d Cong., 2d Sess., 5 (1952); H. R. REP. NO. 1923, 82d Cong., 2d Sess., 6 (1952); see also *J.E.M. Ag Supply, Inc. v. Pioneer Hi-Bred Int'l, Inc.*, 534 U.S. 124, 145-46 (2001) (holding that newly developed plant breeds fall within the subject matter of § 101, and neither the Plant Patent Act nor the Plant Variety Protection Act limits the scope of 35 U.S.C. § 101's coverage). After the initial submission of the patent specification (which includes the description of the invention and claims), patentees are usually forced to further narrow the claimed invention in response to PTO rejections based on prior art or form issues.

<sup>36</sup> At least one author has argued that patent applicants have vested property rights in patent *applications*. Courtenay Brinkerhoff, *Medical Method Patents and the Fifth Amendment: Do the New Limits on Enforceability Effect a Taking?*, 4 U. BALT. INTELL. PROP. J. 147, 159-65 (1996). However, the argument is based on sparse (and very old) case law that has not been adopted by modern courts, particularly the Federal Circuit. See *supra* note 14.

<sup>37</sup> Note that, although the Constitution provides Congress with the power to secure for limited times to inventors the exclusive right to their discoveries, it does not mandate that Congress do so. See U.S. CONST., art. I, § 8, cl. 8. Thus, Congress is not obligated to create patents rights of a particular scope or duration. See *In re Bergy*, 596 F.2d 952, 958-59 (C.C.P.A. 1979) ("It is to be observed that the Constitutional clause under consideration neither gave to nor preserved in inventors (or authors) any rights and set no standards for the patentability of individual inventions; it merely empowered Congress, if it elected to do so, to secure to inventors an 'exclusive right' for an unstated 'limited' time for the stated purpose of promoting useful arts."). *aff'd*, *Diamond*, 447 U.S. 303.

that a private land owner may sell a parcel of land but retain an easement to travel across it at will.<sup>38</sup>

However, once patent property rights vest in private owners, the government's ability to limit them is no different than it is with any other form of property, tangible or intangible.<sup>39</sup> Such limitations are governed primarily by the constraints of the Fifth Amendment, which dictates that no private property shall be taken by the U.S. government without just compensation.<sup>40</sup> Thus, any government action that affects existing patent rights — whether the act of a government employee that impacts a single patent or a congressional act that retrospectively narrows the enforceability of all U.S. patents — is properly considered an appropriation of patent property.<sup>41</sup>

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<sup>38</sup> For example, when Congress changed the term of enforcement for patents in 1995, it provided the option of electing the old calculation method only for patents then in existence, not future grants. See *supra* note 19.

<sup>39</sup> See *Patlex Corp. v. Mossinghoff*, 758 F.2d 594, 600 (Fed. Cir. 1985) ("It does not follow, however, that what Congress can legislate prospectively it can legislate retrospectively. The retrospective aspects of legislation, as well as the prospective aspects, must meet the test of due process, and the justifications for the latter may not suffice for the former.") (quoting *Usery v. Turner Elkhorn Mining Co.*, 428 U.S. 1, 16-17 (1976)).

<sup>40</sup> The Fifth Amendment provides the fundamental protection which prevents the government from completely "ignoring" or "overriding" vested patent property rights. See, e.g., *Patlex*, 758 F.2d at 602-03 (determining the validity of a statute providing for reexamination of patents by considering whether it intruded on pre-existing property rights).

<sup>41</sup> I am of course excepting from this statement "government action" that results in a patent being declared invalid. For example, a federal district court may find a patent invalid in the context of a patent infringement litigation or an action for a declaratory judgment of invalidity. See 28 U.S.C. § 1338 (Supp. V 1999) (providing jurisdiction in the district courts for civil actions "arising under any Act of Congress relating to patents"); 35 U.S.C. § 282 (1994) (stating that patent invalidity is a defense in an infringement action). That judgment effectively bars further assertion of the patent on the theory of collateral estoppel. See *Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found.*, 402 U.S. 313, 349 (1971). Additionally, the PTO may find a patent invalid as a result of one of several proceedings that allow the agency to review some aspect of the propriety of the patent grant. Such proceedings include patent "reexaminations," in which the PTO conducts an additional, limited examination of the patent's validity based on prior art printed publications or patents (35 U.S.C. §§ 301, 302, 311 (1994 & Supp. V 1999)), "reissue" proceedings, in which the PTO conducts an additional examination of a patent based on its owner's request to correct a defective or improper specification or drawing (35 U.S.C. § 251 (1994 & Supp. V 1999)), and "interferences," in which the PTO entertains invalidity contentions in the context of a party's request for a determination of prior invention of the subject matter of an issued patent (35 U.S.C. § 135 (Supp. V 1999)). But these acts are not "takings" of private property; rather, they are properly viewed as judicial determinations that a valid property

*B. Social Limitations on the Government Patent Appropriation Power: Under What Circumstances are They Acceptable?*

The primary issue for most with regard to government "side-stepping" of U.S. patent rights is whether such an action is inherently wrong or whether it can be condoned or even encouraged as a matter of public policy in certain extreme circumstances (e.g., public emergencies). In light of the recent anthrax crisis and the controversy surrounding Cipro®, there has been some rather charged debate over these issues. Many have commented on the concern that any such appropriation could undermine the United States' position that emphasizes mutual respect for and acknowledgement of intellectual property rights among all of the world's sovereign states, no matter how unindustrialized, impoverished or in need.<sup>42</sup> In particular, the United States' strong stance in favor of the enforcement of patent rights for certain AIDS medications in third-world nations (e.g., the African states) may seem hypocritical if the U.S. is perceived to permit the appropriation/derogation of private patent rights when American lives are at stake.<sup>43</sup> On the other side of the fence are those who believe that government appropriation is practically a moral duty in certain circumstances, and a U.S. government policy against acting in such a manner necessarily neglects the interests of its citizens in favor of the interests of patent property owners (often large corporations).<sup>44</sup>

Interestingly, those who propound blanket arguments against government appropriation often fail to note the fact that many such

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right never existed in the first place.

<sup>42</sup> See, e.g., *Defending Against Anthrax: U.S. Patent Implications and Safeguarding Public Health*, METRO. CORP. COUNSEL, Nov. 2001, at 13; Raymond Kurz & Celine Jimenez Crowson, *Patents 'R' Us?: Government Grab of Patent Rights Is Possible, But Dickey Undertaking*, LEGAL TIMES, Nov. 5, 2001, at 27.

<sup>43</sup> See, e.g., Celia W. Dugger, *A Catch-22 on Drugs for the World's Poor*, N.Y. TIMES, Nov. 16, 2001, at W1. But see a very interesting piece by Amir Attaran and Lee Gillespie-White that was recently published in the Journal of the American Medical Association which concluded that "the extreme dearth of international aid finance, rather than patents, is most to blame for the lack of antiretroviral treatment in Africa." Amir Attaran & Lee Gillespie-White, *Do Patents for Antiretroviral Drugs Constrain Access to AIDS Treatment in Africa?*, 286 J. AM. MED. ASSN. 1886, 1891 (Oct. 2001).

<sup>44</sup> See *supra* note 8.

appropriations have already occurred.<sup>45</sup> The use of government power to appropriate patents has been sanctioned for some time, perhaps most prominently in the context of providing a means for allowing the government to acquire the tools necessary to wage war without fear that a patent property owner may refuse to sell or license an invention.<sup>46</sup> Safety and security readiness is still a powerful motive and serves to extend government appropriations beyond cases in which the government infringed because it was simply unaware of the patent or believed the patent to be invalid or unenforceable; some government agencies have even made patent appropriations part of their official policies.<sup>47</sup>

Thus, the issue that must be addressed is not whether appropriation should *ever* occur, but how it should be handled when it does. The use of the government's power to appropriate patent property clearly has the potential to provide for increased government efficiency and public safety. However, improperly applied, it may

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<sup>45</sup> See 7 DONALD S. CHISUM, *PATENTS: A TREATISE ON THE LAW OF PATENTABILITY, VALIDITY AND INFRINGEMENT* § 20.03[6][f] (Rel. 80, Oct. 2001) (listing over twenty-five published cases of patent owners suing to recover compensation for government patent appropriation).

<sup>46</sup> See *Richmond Screw Anchor Co. v. United States*, 275 U.S. 331, 345 (1928) (discussing the extension of the appropriation power and corresponding compensation mechanism to government contractors and noting "The intention and purpose of Congress in the Act of 1918 was to stimulate contractors to furnish what was needed for the War, without fear of becoming liable themselves for infringements to inventors or the owners or assignees of patents."); *TVI Energy Corp. v. Blane*, 806 F.2d 1057, 1060 (Fed. Cir. 1986) ("The Act was amended in 1918 at the behest of the Secretary of the Navy who cited difficulties in procuring goods from private manufacturers necessary to meet military requirements of World War I.").

<sup>47</sup> For example, in response to concerns regarding the barriers to using biomedical research tools that are the subject of U.S. patents, the National Institutes of Health ("NIH") issued a report which concluded that the NIH could be assured of continued access to research tools, in part, because "as a government agency, NIH may use and manufacture any patented invention, whether or not developed with federal funds, and authorize its use and manufacture by others for the United States, without a license, subject to liability for 'reasonable and entire compensation' under 28 U.S.C. §1498." Report of the National Institutes of Health (NIH) Working Group on Research Tools, Presented to the Advisory Committee to the Director (June 4, 1998), available at <http://www.nih.gov/news/researchtools>; see also 48 C.F.R. § 27.104(c) (2001) ("Generally, the Government encourages the use of inventions in performing contracts and, by appropriate contract clauses, authorizes and consents to such use, even though the inventions may be covered by U.S. patents and indemnification against infringement may be appropriate.").

give the public an unfair benefit at the expense of an individual patent owner. It is fair to say that a common denominator in most discussions regarding the propriety of government appropriation is the assumption that any such action will result in the use of the appropriated right in exchange for some payment or royalty rate that is far below the actual market value.<sup>48</sup> Most commentators simply presume that government appropriation confers an advantage over simply purchasing the patented product or licensing the patented method from the rightful owner.<sup>49</sup> That presumed discount for the government is probably the greatest reason that people react strongly one way or the other as to the propriety of such a move.

However, if traditional methods of measuring a patent owner's damages resulting from private infringement are applied to government appropriations, a loss in revenue to the patent owner is by no means a foregone conclusion. Under the private infringement damages methodology, a patent owner may be entitled to receive as compensation the entirety of his or her losses, including the profits on lost sales of products covered by the patent.<sup>50</sup> Patent owners are often quite satisfied to receive an award of lost profits as a remedy to infringement.<sup>51</sup> If the law is clear<sup>52</sup> that a patent owner suffering from

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<sup>48</sup> For example, much of the controversy surrounding Cipro® related to whether Bayer would lose out on the substantial profits it stood to make from sales of branded ciprofloxacin if the United States chose to purchase an otherwise infringing generic version of the drug instead. See McNeil, *supra* note 7.

<sup>49</sup> See *id.*; John A. Harrelson, *Trips, Pharmaceutical Patents, and the HIV/AIDS Crisis: Finding the Proper Balance Between Intellectual Property Rights and Compassion*, 7-SPG WIDENER L. SYMP. J. 175, 190-91 (2001).

<sup>50</sup> *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1544 (Fed. Cir. 1995) (en banc) (*aff'g*, in part, a district court's award of lost profits and noting "The statute thus mandates that a claimant receive damages 'adequate' to compensate for infringement. Section 284 further instructs that a damage award shall be 'in no event less than a reasonable royalty'; the purpose of this alternative is not to direct the form of compensation, but to set a floor below which damage awards may not fall.").

<sup>51</sup> Granted, the loss of the equitable right to determine who may use the patented invention (or, more properly, who will not be prevented from using it) is necessarily incurred along with the loss in revenue (if any) from the appropriation. See *H.H. Robertson Co. v. United Steel Deck, Inc.*, 820 F.2d 384, 390 (Fed. Cir. 1987) ("The nature of the patent grant thus weighs against holding that monetary damages will always suffice to make the patentee whole, for the principal value of a patent is its statutory right to exclude."), *abrogated on other grounds*, *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 977 (Fed. Cir. 1995) (en banc). However, the loss of that right is not as significant in the context of government appropriation as private infringement because the government will not establish itself as a

a government appropriation had the same opportunity to receive full compensation as a plaintiff in a private infringement suit, much of the intellectual property owner's ire at a Cipro®-like situation would dissipate. Conversely, with the potential expense inherent in making full reparations to an aggrieved patent owner, one would presume that the government would undertake such an appropriation only if there was some need that could not be fulfilled by simply negotiating and purchasing patented products from the patent owner.<sup>53</sup> Incidents of government appropriation would be expected to remain limited.<sup>54</sup>

On the other hand, if the private infringement damages scheme does not apply, the compensation issue becomes more of a concern. For example, if a mere reasonable royalty is all that is required,<sup>55</sup> the incentive for the government to appropriate rises dramatically. And while the reduced cost of paying a license as opposed to the entirety of actual damages is an obvious benefit to the government, there are other less apparent benefits to the government under a royalty-based compensation system. To name one occasionally spoken of in the popular press, the government could use its appropriation power as a negotiating "sword" to force down the high price of certain

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long-term competitor to the patent owner. Thus, market effects such as loss of market share are not as much of a concern.

<sup>52</sup> One could argue that some negotiating power is attached to the appropriation authority regardless of whether an appropriation actually occurs, as evidenced by the fact that the U.S. government was able to intimidate Bayer into lowering its prices without "side-stepping the patent." See *supra* note 9. However, the government's ability to intimidate is derived primarily from the uncertainty of the compensation issues. Once the issues are clarified, that power would be expected to disappear.

<sup>53</sup> For example, dealing with a "hold-out" patent owner who would otherwise refuse to sell or license the intellectual property to the government or if there was no time to negotiate a sale.

<sup>54</sup> See *supra* note 1 & *infra* note 58.

<sup>55</sup> In general, a reasonable royalty for the use of a patented invention confers much less value than the profit generated by the sale of goods covered by the patent. That is because a reasonable royalty is based on what "a person, desiring to manufacture [, use, or] sell a patented article, as a business proposition, would be willing to pay as a royalty and yet be able to make [, use, or] sell the patented article, in the market, at a reasonable profit." *Trans-World Mfg. Corp. v. Al. Nyman & Sons*, 750 F.2d 1552, 1567 (Fed. Cir. 1984) (quoting *Goodyear Tire & Rubber Co. v. Overman Cushion Tire Co.*, 95 F.2d 978, 984 (6th Cir. 1938)).

patented goods (*e.g.*, pharmaceuticals).<sup>56</sup> In this case, one can appreciate the fact that intellectual property owners would have a generally negative opinion on the use of the power in this manner, while others (*e.g.*, certain health care reform groups or antitrust advocates) may welcome this weapon into their traditional arsenals.<sup>57</sup>

It seems clear that the level of compensation required for a patent appropriation has much (if not everything) to do with one's attitude toward the propriety of such an action. Moreover, a determination of the appropriate method of compensation for government takings of patent property rights is a crucial predicate to informed policy making. Understanding how compensation for government patent appropriation has been handled to date requires an appreciation of the roots of the basic appropriation power in this context as well as a familiarity with the court cases that have shaped the current legal environment.

### C. *The Authority of the Government to Appropriate Private Patents*

Although cases in which the government is accused of taking vested patent property interests occur less frequently than private patent infringement actions,<sup>58</sup> such cases have arisen from time to time and unauthorized government appropriations have been recognized as compensable by the courts.<sup>59</sup> The development of the law has been, for the most part, in the context of a patent owner's suit against the U.S. government for just compensation under 28 U.S.C. § 1498.<sup>60</sup> The placement of § 1498 in the U.S. Code suggests that it is primarily a jurisdictional statute which waives the U.S. government's immunity

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<sup>56</sup> In fact, this has been incorporated into pending legislation as a factor for assessing the appropriate level of compensation for government appropriation. See *infra* note 212 and accompanying text.

<sup>57</sup> See Harrelson, *supra* note 49, at 188-91.

<sup>58</sup> In 1995, the House Committee on the Judiciary found that "about 10 cases of patent infringement a year are filed against the federal government . . ." H.R. Rep. No. 104-373, at 4 (1995). In contrast, the Administrative Office of the U.S. Courts reported that there were 1,723 patent infringement cases filed in the district courts that same year. ADMIN. OFF. OF THE U.S. CTS, ANN. REP. OF THE DIR. Tbl.C-2A (1997) (reporting cases commenced, by nature of suit, 1993 through 1997).

<sup>59</sup> See generally CHISUM, *supra* note 45, at § 20.03[6].

<sup>60</sup> Government patent appropriations cases prior to 1948 were brought under an earlier codification of the statute, 35 U.S.C. § 68 (1940). See, *e.g.*, *Marconi Wireless Telegraph Co. of Am. v. United States*, 320 U.S. 1 (1943). That earlier codification contained the phrase "reasonable and entire compensation." See *infra* note 79 and accompanying text.

from private suit and provides patent and copyright owners with a right of action for unauthorized appropriation of patents and copyrights.<sup>61</sup> The statute further states that such action will take place in the United States Court of Federal Claims.<sup>62</sup> In addition to providing the jurisdictional basis of patent infringement claims against the U.S. government, it can also be read to quantify the recovery that may be obtained:

Whenever an invention described in and covered by a patent of the United States is used or manufactured by or for the United States without license of the owner thereof or lawful right to use or manufacture the same, the owner's remedy shall be by action against the United States in the United States Court of Federal Claims for the recovery of his *reasonable and entire compensation for such use and manufacture . . .*.<sup>63</sup>

The courts have recognized that § 1498 is the sole means by which patent and copyright owners who have suffered an appropriation of their intellectual property by the federal government can recoup compensation.<sup>64</sup>

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<sup>61</sup> See *Leesona Corp. v. United States*, 599 F.2d 958, 966-67 (Ct. Cl. 1979) (en banc); see also H.R. Rep. No. 1288, at 3 (1910) (report accompanying the bill which became the predecessor statute to § 1498) ("Our only purpose is to extend the jurisdiction of that court so that it may entertain suits and award compensation to the owners of patents in cases where the use of the invention by the United States is unauthorized and unlawful; in short, to give the court in patent cases, in addition to the jurisdiction it now has in matters of contract, jurisdiction in cases of tort.").

<sup>62</sup> This court, with original jurisdiction over claims against the United States, has had several names over the years. It was the "Claims Court" from 1982-1992 and renamed the "Court of Federal Claims" in 1992. Pub. L. No. 102-572, 106 Stat. 4506 (1992). Appeals are directed to the Federal Circuit (and not limited to patent infringement claims). Pub. L. No. 97-164, 96 Stat. 38 (1982). Prior to 1982, the trial division and the appellate division shared the same name, "Court of Claims," but the trial division could make only non-binding recommended conclusions of law and findings of fact; only the appellate division could render precedential final judgments. See Joseph V. Colaianni, *Patent Litigation Before the New Claims Court*, 66 J. PAT. OFF. SOC'Y 119, 135-36 (1984).

<sup>63</sup> 28 U.S.C. § 1498(a) (Supp. V 1999) (emphasis added).

<sup>64</sup> See, e.g., *Leesona*, 599 F.2d at 967. At present, state liability for patent appropriations is up in the air. Until recently, 35 U.S.C. § 296 (1994) provided a means for suing states in federal court as private patent infringers. However, in *Florida Prepaid Postsecondary Education Expense Bd. v. College Savings Bank*, 527 U.S. 627 (1999), the Supreme Court held that Congress's abrogation of state immunity under the Eleventh Amendment was improperly executed. The court found that Congress based the abrogation of state immunity on state failures to provide adequate due process for intellectual property claims as required by the



The award of compensation under § 1498 is by no means automatic, even if a patent owner can prove damages resulting from the appropriation. The government has a right to most of the same defenses that are held by a defendant in a private patent infringement action.<sup>65</sup> Therefore, if the government can prove the patent invalid or unenforceable, compensation will not be awarded.<sup>66</sup> This has

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Fourteenth Amendment, but Congress did not have sufficient support for such an action. *Id.* at 644-46. Surprisingly, the Court refused to consider whether the Act was justified under the Just Compensation Clause of the Fifth Amendment because Congress had not specifically invoked its authority. *Id.* at 642, n. 7 ("There is no suggestion in the language of the statute itself, or in the House or Senate Reports of the bill which became the statute, that Congress had in mind the Just Compensation Clause of the Fifth Amendment. Since Congress was so explicit about invoking its authority under Article I and its authority to prevent a State from depriving a person of property without due process of law under the Fourteenth Amendment, we think this omission precludes consideration of the Just Compensation Clause as a basis for the Patent Remedy Act."). Currently, bills that are pending in Congress to restore state liability for intellectual property infringement specifically mention Fifth Amendment takings as well as Fourteenth Amendment due process violations. *See, e.g.*, Intellectual Property Protection Restoration Act of 2002, S. 2031, sec. 5(a) & (b), 107th Cong. (2002).

Because patent infringement is a federal cause of action, recovery for that specific tort is not possible in state courts. *See Abbott Labs v. Brennan*, 952 F.2d 1346, 1349 (Fed. Cir. 1992); 28 U.S.C. § 1338(a) (1994). Recovery from an appropriation by a state government may still be available to some extent via a state court action, but there is neither uniformity of protection between states nor a guarantee that such a remedy would be as comprehensive as that available under federal law. *See, e.g., Florida Prepaid*, 527 U.S. at 644-46.

<sup>65</sup> The predecessor to Section 1498 contained language related to the government's defenses. When 35 U.S.C. § 68 was reorganized as § 1498, language referring to the government's defenses was omitted as unnecessary. *See* Reviser's Note to Section 1498, 28 U.S.C. § 1498, p. 382 (1994) ("Provisions contained in the second proviso of said section 68, relating to right of the United States to any general or special defense available to defendants in patent infringement suits, were omitted as unnecessary. In the absence of statutory restriction, any defense available to a private party is equally available to the United States."). However, the courts have ruled that some ancillary defenses were not incorporated into Section 1498. *See Motorola, Inc. v. United States*, 729 F.2d 765, 769 (Fed. Cir. 1984) (finding that a defense based on a failure to mark as required in 35 U.S.C. § 287 is not applicable in Section 1498 actions).

<sup>66</sup> A patent can be invalid if, for example, the claimed invention is on sale more than one year before an application is filed with the PTO. *See, e.g., Scaltech, Inc. v. Retec/Tetra, L.L.C.*, 269 F.3d 1321, 1330 (Fed. Cir. 2001). Alternatively, a patent may be valid but unenforceable due to, for example, a patent applicant's failure to disclose material information to the examiner. *See, e.g., Brasseler U.S.A. I, LLP v. Stryker Sales Corp.*, 267 F.3d 1370, 1379 (Fed. Cir. 2001).

occurred in several actions under § 1498.<sup>67</sup>

Despite the fact that a specific statute exists related to government appropriations of patent property, the basis of the government's authority is somewhat murky in several important respects. Particularly, the extent to which government appropriation of existing patents implicates the protections guaranteed by the Fifth Amendment (as well as its limitations) depends on how the current statutory scheme is interpreted. The relevant case law discloses at least two possible bases for government appropriation, which this paper will heretofore refer to as the "Eminent Domain Theory" and the "Established Statutory Authority Theory."

#### *D. The "Eminent Domain" Theory of Government Appropriation*

The basic power of the U.S. government to take private property for public use (referred to in Constitutional parlance as a "taking") as well as the limitations on that power have been well-defined over the years, especially in the context of real estate law. That authority, known as eminent domain, is generally understood to stem from the inherent power of the government of a sovereign state to use the property within its boundaries when necessary for the good of the state.<sup>68</sup> That concept is, of course, older than written history and its application by modern-day governments is still considered essential for the efficient administration of state affairs.

At the dawn of the United States, the Founding Fathers, ever worried about government tyranny, incorporated an important limitation on this concept into the Constitution: a requirement that fair compensation be given by the government for any taking of property. The idea is to limit the government's incentive to arbitrarily take the property of the populace by putting a price tag on it.<sup>69</sup> Conversely, it follows that, if taking the property is truly important for the good of the state, the state (and the taxpayers who support it) should be willing to pay a fair and just price for it. The expectation

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<sup>67</sup> See, e.g., *Zafcarin v. United States*, 213 F.3d 1366 (Fed. Cir. 2000); *Orthopedic Equip. Co. v. United States*, 702 F.2d 1005 (Fed. Cir. 1983).

<sup>68</sup> See *United States v. Carmack*, 329 U.S. 230, 241-42 (1946) (The Fifth Amendment does not grant the taking power, but is "a tacit recognition of a pre-existing power . . .").

<sup>69</sup> See William Michael Treanor, *The Origins and Original Significance of the Just Compensation Clause of the Fifth Amendment*, 94 YALE L.J. 694, 711-12 (1985).

is that the government will use the process only when an arm's length transaction is not possible.<sup>70</sup>

Significantly, the government's right to use private property for the public good under the theory of eminent domain is generally unquestioned,<sup>71</sup> so long as the public purpose of the taking is established.<sup>72</sup> Courts have not required the government to balance the hardships between the individual and the general public before permitting a taking.<sup>73</sup> It is an inherent power vested in the government. Therefore, once it is established that a government action would effect a taking, the appropriate question is almost never whether the government *can* take the property in question, but rather how much compensation should be paid.<sup>74</sup>

Against this backdrop stands 28 U.S.C. § 1498. Although it employs the phrase "reasonable and entire compensation"<sup>75</sup> as

<sup>70</sup> See THOMAS J. MICELI, *ECONOMICS OF THE LAW* 138 (1997) (Reviewing several theories regarding the rationale for eminent domain power and concluding "The justification for eminent domain, then, is the need to prevent hold-outs, which is a form of transaction costs.").

<sup>71</sup> However, some limitation on this power is arguably imposed by the United States' obligations under international treaty. The Agreement on Trade-Related Aspects of Intellectual Property Rights, art. 31(b), Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, Legal Instruments-Results of the Uruguay Round, 33 I.L.M. 81 (1994) (hereinafter TRIPS), explicitly allows for "use of the subject matter of a patent without the authorization of the right holder" in the case of "national emergency or other circumstances of extreme urgency or in cases of public non-commercial use." That use is permissible contingent on the authorizing member meeting several conditions, including that "the [patent] right holder shall be paid adequate remuneration in the circumstances of each case, taking into account the economic value of the authorization." *Id.* at art. 31(h).

<sup>72</sup> Even the establishment of public use is only a minor obstacle. See *Hawaii Housing Authority v. Midkiff*, 467 U.S. 229, 240 (1984) ("There is, of course, a role for courts to play in reviewing a legislature's judgment of what constitutes a public use, even when the eminent domain power is equated with the police power. But the Court in *Berman* made clear that it is 'an extremely narrow' one. . . .") (quoting *Berman v. Parker*, 348 U.S. 26, 32 (1954)).

<sup>73</sup> See *Berman*, 348 U.S. at 33-36 (sustaining the condemnation of blighted areas for public housing projects and stating "The rights of these property owners are satisfied when they receive that just compensation which the Fifth Amendment exacts as the price of the taking.").

<sup>74</sup> *Id.*

<sup>75</sup> The term "entire" in § 1498 was inserted merely to indicate the exclusivity of the jurisdiction of the Court of Claims in such matters, *i.e.*, that the entire compensation would be awarded by that court and no other. *Leesona Corp. v. United States*, 599 F.2d 958, 967 (Ct. Cl. 1979) (en banc) (citing 56 CONG. REC. 7961 (remarks of Rep. Padgett)). But that

opposed to "just compensation," it has generally been recognized as incorporating eminent domain principles.<sup>76</sup> This means, in essence, that the statute should provide the same level — not more or less — of compensation available to any property owner subject to a taking. That reading of the statute has been applied by the courts in a fairly consistent manner.<sup>77</sup> An important aspect of incorporating eminent domain doctrine into § 1498 is the fact that the statute doesn't create the power and remedy in and of itself — it merely provides the avenue for obtaining a remedy.

The reading of eminent domain standards is consistent with the legislative history of § 1498 as well. The basic statute has actually been in existence for quite some time, with the earliest enactment predating the current patent statute by over forty years.<sup>78</sup> The predecessor statute to 28 U.S.C. § 1498 was enacted in 1910 in a form remarkably similar to the present.<sup>79</sup> Congress's intent in

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leaves "reasonable . . . compensation," which is no more clear on its face than the "just compensation" requirement of the Fifth Amendment.

<sup>76</sup> See, e.g., *Crozier v. Fried Krupp Aktiengesellschaft*, 224 U.S. 290, 307 (1912).

<sup>77</sup> See, e.g., *Standard Mfg. Co. v. United States*, 42 Fed. Cl. 748, 757 (Fed. Cl. 1999) ("Use by the government of a patented invention without an express license from the patentee is properly viewed as a taking of property under the Fifth Amendment to the Constitution through the government's exercise of its power of eminent domain."); *Hughes Aircraft Co. v. United States*, 86 F.3d 1566, 1572 (Fed. Cir. 1996), *vacated on other grounds and remanded*, 520 U.S. 1183 (1997), *reinstated*, 140 F.3d 1470 (Fed. Cir. 1998) (recovery is based on eminent domain); *Leesona*, 599 F.2d at 967 ("This court has traditionally searched the law of eminent domain for legal precedents and principles to apply in determining the 'reasonable and entire compensation' to be granted in a valid infringement action against the government."); *Calhoun v. United States*, 453 F.2d 1385, 1391 (Ct. Cl. 1972) ("The theory underlying a patent suit in this court pursuant to [§ 1498] is that the Government, when a patent device or invention is made or used by or for the United States, *ipso facto* takes by eminent domain a compulsory compensable license in the patent; the patentee obtains his Fifth Amendment just compensation for that taking through his action here under § 1498.").

<sup>78</sup> The last major revision of the United States' patent laws occurred as a result of the Patent Act of 1952, ch. 950, 66 Stat. 792; July 19, 1952, *codified at* Title 35 of the U.S. Code.

<sup>79</sup> That prior statute contained essentially the same language as the current version with respect to compensation. Act of June 25, 1910, *Additional Protection for Owners of Patents*, 36 Stat. 851, *amended by* Act of July 1, 1918, 40 Stat. 705 (providing in part: "Whenever an invention described in and covered by a patent of the United States shall hereafter be used or manufactured by or for the United States without license of the owner thereof or lawful right to use or manufacture the same, such owner's remedy shall be by suit against the United States in the Court of Claims for the recovery of his reasonable and entire compensation for such use and manufacture . . ."). The primary purpose of the 1918

enacting the statute was to explicitly waive governmental immunity for the limited purpose of a suit to obtain compensation for the government's unauthorized use of a valid patent.<sup>80</sup> Prior to that Act, a patent owner did hold a Fifth Amendment right to compensation for such acts, but without a real avenue for enforcement.<sup>81</sup>

There is significance in applying an eminent domain label to § 1498. Most importantly, it limits the remedies to those flowing from the Fifth Amendment's just compensation requirement rather than the somewhat broader scope of private infringement tort remedies. That basic difference in theory was recognized by the court in *Leesona Corp. v. United States*.<sup>82</sup> In that case, the United States Court of Claims<sup>83</sup> reviewed a trial judge's determination that the United States infringed<sup>84</sup> several patents related to rechargeable batteries and, in doing so, reviewed the history and purpose of § 1498. The court noted the difference between an infringement action against private parties versus one against the government:

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amendment was to clarify immunity under the statute for contractors hired by the government. See *Richmond Screw Anchor Co. v. United States*, 275 U.S. 331, 331 (1928). The prior statute was originally codified as part of the Patent Act at 35 U.S.C. § 68 (1940), and reorganized as § 1498 of Title 28 in 1948. 62 Stat. 941 (June 25, 1948).

<sup>80</sup> *Crozier v. Fried Krupp Aktiengesellschaft*, 224 U.S. 290, 305 (1912); H.R. Rep. No. 1288, *supra* note 61, at 3.

<sup>81</sup> See *James v. Campbell*, 104 U.S. 356, 357-59 (1882) ("That the government of the United States when it grants letters-patent for a new invention or discovery in the arts, confers upon the patentee an exclusive property in the patented invention which cannot be appropriated or used by the government itself, without just compensation, any more than it can appropriate or use without compensation land which has been patented to a private purchaser, we have no doubt. . . . The most proper forum for such a claim is the Court of Claims, if that court has the requisite jurisdiction. As its jurisdiction does not extend to torts, there might be some difficulty, as the law now stands, in prosecuting in that court a claim for the unauthorized use of a patented invention . . .").

<sup>82</sup> 599 F.2d 958 (Ct. Cl. 1979) (*en banc*).

<sup>83</sup> Decisions of the Court of Claims (but not the Claims Court or the Court of Federal Claims) are binding on the Federal Circuit unless they are overruled by an *en banc* decision. See *Newell Cos., Inc. v. Kenny Mfg. Co.* 864 F.2d 757, 765 (Fed. Cir. 1988); *South Corp. v. United States*, 690 F.2d 1368, 1370 & n. 2 (Fed. Cir. 1982).

<sup>84</sup> This paper generally uses the term "appropriate" to describe a government taking of private property instead of the term "infringe," which is applied to private actions. However, the courts often use "infringe" to describe both varieties of impacts on property rights. See, e.g., *Brunswick Corp. v. United States*, 36 Fed. Cl. 204 (1996), *aff'd*, 152 F.3d 946 (Fed. Cir. 1998) (unpublished).

The theory for recovery against the government for patent infringement is not analogous to that in litigation between private parties. When the government has infringed, it is deemed to have "taken" the patent license under an eminent domain theory, and compensation is the just compensation required by the fifth amendment. Title 28 U.S.C. § 1498 contains no directions or limitations as to the grant of damages other than its mandate of "reasonableness" and "entirety."<sup>85</sup>

The court in *Leesona* criticized the trial judge's award of treble damages and costs because it reflected a tort approach to compensation which was not appropriate in view of the eminent domain underpinnings of § 1498.<sup>86</sup>

Under the *Leesona* interpretation, although § 1498 may appear to state a measure of damages that may be collected by a plaintiff (albeit in vague terms), it is actually a direction to apply eminent domain standards. That means that the lower limit is provided by the Constitution. No matter how the phrase "reasonable and entire compensation" is read, it would be unconstitutional for a federal court to award anything less than just compensation.<sup>87</sup>

#### *E. The "Established Statutory Authority" Theory of Government Appropriation*

Due to the unique qualities of government-created property rights,<sup>88</sup> it is possible for the government to set aside a means of appropriating such property that would not implicate the protections of the Fifth Amendment.<sup>89</sup> To extend the real property easement analogy stated earlier, the government can reserve certain rights in intellectual property at the time of the grant and exercise these rights without infringing a private property interest. An example can be

<sup>85</sup> *Leesona*, 599 F.2d at 965.

<sup>86</sup> *Id.* at 969.

<sup>87</sup> At least for issued patents, this is true. As noted above, Congress is not restrained in prospectively limiting an award. See *supra* Part II.A.

<sup>88</sup> See *id.*

<sup>89</sup> Note that this theory is only possible for property rights that are defined and conferred by the government, as opposed to rights conferred by private citizens. For example, the Supreme Court has rejected the argument that a private land purchaser may be on "notice" of a government regulatory scheme such that the government can effect a regulatory taking of the land without being liable for Fifth Amendment just compensation. *Palazzolo v. Rhode Island*, 533 U.S. 606, 613 (2001) ("The State may not put so potent a Hobbesian stick into the Lockean bundle").

found in the provisions of the Bayh-Dole Act<sup>90</sup> which allows private parties to own patent rights in federally-funded inventions, but reserves in the federal government a nonexclusive, nontransferable, irrevocable, paid-up license for the invention to practice it or have it practiced for or on the government's behalf throughout the world.<sup>91</sup>

Can § 1498 be viewed as such a reservation of patent property rights? Although the weight of the case law declares that § 1498 actions represent an exercise of eminent domain power, it could be argued that the existence of the statute itself means that government appropriation of private patents are not "takings." That theory is based on the fact that § 1498 has been in existence since well before the time that all currently unexpired patent property rights were defined by the government.<sup>92</sup> Therefore, current patent owners have taken their grants with the knowledge that the government has the right to appropriate patent rights without prior authorization of the patent owner. In other words, patent applicants are participants in a system in which the possibility of government appropriation is understood and accepted in view of established statutory authority. According to the theory, as of at least the date of enactment of the earliest version of § 1498,<sup>93</sup> patent grants include the possibility that the government may exercise dominion over them when necessary, and compensation is then available.

Significantly, that precise point of view was articulated by the United States Court of Federal Claims<sup>94</sup> in *De Graffenried v. United*

<sup>90</sup> 35 U.S.C. §§ 200-211 (1994 & Supp. V 1999), amended by Act of Nov. 1, 2000, 35 U.S.C.A. §§ 200, 202, 207, 209 (West 2001). In some ways, the Bayh-Dole Act is the reverse situation, as its purpose was to allow private parties to obtain patent rights they would not otherwise have the right to own in order to increase utilization of federally-sponsored inventions and promote competition. See COUNCIL ON GOV'T. REGULATIONS, *THE BAYH-DOLE ACT: A GUIDE TO THE LAW AND IMPLEMENTING REGULATIONS* (1999).

<sup>91</sup> *Id.* at § 202(c) (1994); see also 42 U.S.C. § 2183 (1994) (providing for compulsory licensing of patents having "primary importance in the production or utilization of special nuclear material or atomic energy") and 42 U.S.C. § 7608 (1994) (providing for compulsory licensing of patents necessary to enable any person to comply with the implementation of Clean Air Act requirements).

<sup>92</sup> In other words, the statute has effectively been in existence since 1910, long before any patent currently in force was issued. See *supra* note 60.

<sup>93</sup> See *supra* note 79.

<sup>94</sup> See *supra* notes 62 and 83.

*States*<sup>95</sup> in which the court held that § 1498 cases were not "eminent domain proceedings" under 28 U.S.C. § 2412:

[W]hile a Section 1498 action may have a similar theoretical basis to an eminent domain proceeding, a Section 1498(a) action cannot constitute an "eminent domain proceeding" because in a technical sense, the United States has not "taken" any property.

\* \* \* \*

Because a patent owner's property rights under the applicable statutory scheme do not include the right to exclude the government from using his or her patented invention, it does not "take" any property interest that belongs to the patent owner. Stated in another way, the government does not have to resort to exercising its sovereign power of eminent domain to utilize a patent owner's patented invention because the statutory framework that defines a patent owner's property rights gives the government the authority to use all patented inventions. Thus, the government cannot "take" what it already possesses.<sup>96</sup>

Of particular import if this theory is followed is the fact that the Constitution does not provide a lower limit to compensation. Rather, the lower limit is provided by the statutory definition of the compensation available to the property owner. If the courts were to interpret "reasonable and entire compensation" to allow the government to take an automatic license with a nominal royalty for the use of any U.S. patent, that would be perfectly acceptable, at least from a constitutional perspective.<sup>97</sup> Since, under the Established Statutory Authority Theory, the compensation scheme is wholly contained in the statutory language, the significance of court interpretation of and the legislative intent in the specific language is dramatically increased.

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<sup>95</sup> 29 Fed. Cl. 384 (Fed. Cl. 1993).

<sup>96</sup> *Id.* at 387-88.

<sup>97</sup> Of course, much more complicated are the international comity issues related to patent enforcement that would stem from any act that gives the federal government the ability to arbitrarily claim the entire value of U.S. patents through reservation of the grant (many of which are held by foreign companies located in countries in which the United States is encouraging stronger enforcement of patent rights). Additionally, the United States' commitments under international treaty may be implicated. See TRIPS, *supra* note 71, at art. 30 ("Members may provide limited exceptions to the exclusive rights conferred by a patent, provided that such exceptions do not unreasonably conflict with a normal exploitation of the patent and do not unreasonably prejudice the legitimate interests of the patent owner, taking account of the legitimate interests of third parties").



But what is the practical impact of analyzing the existing § 1498 under the Established Statutory Authority Theory? Even if one accepts the premise of the Theory, the fact is that the language of § 1498 has been interpreted to provide at least the eminent domain standards due to the legislative intent in creating the statute.<sup>98</sup> The Supreme Court itself has stated that "there is no room for doubt that the [predecessor statute to § 1498] makes full and adequate provision for the exercise of the power of eminent domain for which considered in its final analysis it was the purpose of the statute to provide."<sup>99</sup> This would seem to render meaningless any distinction between the Eminent Domain Theory and the Established Statutory Authority Theory.

In fact, there may be a reasonable argument that the pronouncements in various decisions that link § 1498 to eminent domain law and the corresponding Fifth Amendment protections are nothing more than dicta.<sup>100</sup> Moreover, that dictum may be based on an incorrect assumption regarding the predecessor statute to § 1498. There is no doubt that, in enacting the original 1910 Act, Congress was well aware of the Fifth Amendment constraints on government appropriations of existing patent rights.<sup>101</sup> However, it is not entirely clear that Congress believed Fifth Amendment compensation rules should necessarily apply to grants of patent property rights made *subsequent* to the passage of the act.<sup>102</sup> Note that the original Act, as

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<sup>98</sup> See *supra* Part II.B.

<sup>99</sup> *Crozier v. Fried Krupp Aktiengesellschaft*, 224 U.S. 290, 307 (1912).

<sup>100</sup> See *De Graffenried*, 29 Fed. Cl. at 386-87 (finding that the statements in *Leesona* regarding the eminent domain underpinnings of Section 1498 were not controlling because "they constitute dicta").

<sup>101</sup> See H.R. Rep. No. 1288, *supra* note 61, at 2-3 ("The fifth amendment to the Constitution provides that no private property shall be taken without compensation, and yet, in flat violation of this provision and the decisions of the Supreme Court, the Government has again and again seized private property in the form of patent rights without compensation, and has provided no way in which compensation can possibly be secured."); 45 CONG. REC. 8755, 8756 (1910) (statement of Senator Crumpacker in reference to the bill which became the 1910 Act) ("In the first place, Mr. Speaker, the Constitution declares that there shall be property in inventions and the Supreme Court of the United States has held that they are as much property as any other species of property can be, and that property can not be taken without due process of law or without just compensation.").

<sup>102</sup> To be fair, it is not clear that the members of the 61st Congress thought about that issue at all. The question of compensation for future patentees is not addressed in the committee report or the debates related to the passage of the Act of 1910. See generally H.R. Rep. No.

well as the present § 1498, use the phrase "reasonable and entire compensation" instead of the "just compensation" language of the Fifth Amendment. One possible interpretation is that Congress intended to allow Fifth Amendment compensation when required (existing patents) but something less, though reasonable, for future patent grants. The *Leesona* court touched upon this idea in addressing the Supreme Court's interpretation of the 1910 and 1918 Acts in *Richmond Screw Anchor Co. v. United States*:<sup>103</sup>

While *Richmond Screw* dealt with certain constitutional difficulties traceable to the impact of the 1910 and 1918 statutes on existing patent rights, it is to be noted that § 1498 was on the books in substantially its present form when all the patents involved in this case [*Leesona*] were applied for. In *Richmond Screw* there were troublesome retroactive changes in the incidents of a patent, much to the disadvantage of the patentee . . . There is, however, no attempt in § 1498, as we construe it, to authorize uncompensated expropriation of patents whenever issued.<sup>104</sup>

Although the court concluded that the legislative intent behind § 1498 required *some* compensation for future patent grants, it at least recognized the possibility that the legislature could have intended a lesser remedy for government appropriations.

Regardless, the better view under the Established Statutory Authority Theory, at least for the sake of moving forward in the analysis, is to assume that § 1498 incorporates the baseline Fifth Amendment compensation standards. When the predecessor statute was enacted in 1910, Congress could have distinguished the remedies, providing one measure of compensation for existing patents and another for future patent grants, but it did not.<sup>105</sup> In all of the debate surrounding the bill's enactment, there is no evidence that Congress intended future grants to be treated differently.<sup>106</sup> And realistically speaking, the courts are unlikely to uproot even *dicta* that have been so firmly established in the interpretation of a ninety-two-year-old statute. To suddenly arrive at a new interpretation of "reasonable and entire" would disrupt what little guidance has been provided in

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1288, *supra* note 61, & 45 CONG. REC. 8755-85 (1910).

<sup>103</sup> 275 U.S. 331 (1928).

<sup>104</sup> *Leesona Corp. v. United States*, 599 F.2d 958, 968 (Ct. Cl. 1979) (en banc).

<sup>105</sup> See *supra* notes 60 and 61.

<sup>106</sup> See generally 45 CONG. REC. 8755-85 (1910).

the case law to date. Therefore, even though § 1498 could provide a lower bar for compensation than the Fifth Amendment under the Established Statutory Authority Theory, it makes more sense to interpret the compensation standards consistently.

Although characterizing § 1498 as either a reservation of property rights or merely a jurisdictional basis for eminent domain recovery probably has little effect on the determination of damages under the current scheme, the utilization of either basis for appropriation has implications for future Congressional acts that seek to restrict claims against the government for patent appropriation.<sup>107</sup> One cannot underestimate the importance of clearly grounding the authority of a government appropriations statute as it may directly affect the compensation that must be rendered.<sup>108</sup>

### III. THE TREATMENT TO DATE OF COMPENSATION FOR GOVERNMENT APPROPRIATIONS OF PRIVATELY-OWNED PATENTS

Assuming one accepts that Fifth Amendment standards are controlling with respect to compensation under § 1498, it is still difficult to quantify "just compensation" when it comes to the specific case of government appropriations of U.S. patents. Of course, a well-established scheme for calculating damages exists in private infringement actions. There is, however, some question as to how much of this tort-based scheme is applicable to determining compensation for an eminent domain taking. Before addressing what the courts have said about the meaning of "just compensation" in this context to date, it is useful to establish a common ground for the valuation of patent property in the first instance.

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<sup>107</sup> See, e.g., Public Health Emergency Medicines Act, H.R. 3235, 107th Cong. (2001), which reserves in the government a right to a compulsory license of patented inventions in a public health "emergency." Section (b) of the act sets out nine factors that the Secretary of Health and Human Services may consider in calculating compensation for the taking, none of which bear any resemblance to methods used in eminent domain or private patent infringement actions. See *infra* note 212. This section may be Constitutionally impermissible under the Eminent Domain Theory but acceptable under the Established Statutory Authority Theory.

<sup>108</sup> The Public Health Emergency Medicines Act does not establish its authority one way or the other. See H.R. 3235, *supra* note 107.

*A. Patent Damages in General*

In general, the damages awarded for the infringement of property rights (both tangible and intangible) serve to, *inter alia*, compensate for the harm caused by varying levels of unauthorized appropriation, as well as punish the wrongdoer for the act.<sup>109</sup> Patents, specifically, have well-established categories of damages associated with them in the context of infringement torts, and these categories provide a useful reference point for the analysis of § 1498.

The Patent Act sets forth the basic scheme for relief from an infringement of patent rights in the context of private infringement.<sup>110</sup> A patent owner may be entitled to damages, an injunction and, in exceptional cases, attorneys' fees.<sup>111</sup> However, as previously noted, an action against the government for compensation under these circumstances is not an action in tort; rather, it is an eminent domain (or analogous) proceeding.<sup>112</sup> The courts have firmly stated that injunctive relief is not available under § 1498.<sup>113</sup> The only relief accorded a patent owner in cases of government appropriation is damages, with costs (including attorneys' fees) awarded in special circumstances.<sup>114</sup>

Although the Patent Act does not explicitly list the entirety of monetary damages permitted as a consequence of infringement, the courts have recognized two distinct categories: (1) lost profits and (2)

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<sup>109</sup> See RESTATEMENT (SECOND) OF TORTS § 901 (1979).

<sup>110</sup> See 35 U.S.C. §§ 283-285 (1994 & Supp. V 1999).

<sup>111</sup> *Id.*

<sup>112</sup> See *supra* Part II.

<sup>113</sup> See, e.g., *Motorola, Inc. v. United States*, 729 F.2d 765, 768 n.3 (Fed. Cir. 1984) ("injunctive relief under 35 U.S.C. § 283 is not available to a patent owner in a § 1498 action."); *Leesona Corp. v. United States*, 599 F.2d 958, 968 (Ct. Cl. 1979) (en banc) ("The injunctive relief of 35 U.S.C. § 283 could not be awarded, of course, since this court lacks the power to grant such relief.").

<sup>114</sup> See 28 U.S.C. § 1498 (Supp. V 1999) (costs, including attorneys' fees are only recoverable "if the owner is an independent inventor, a non-profit organization, or an entity that had no more than 500 employees at any time during the 5-year period preceding the use or manufacture of the patented invention by or for the United States"); *Leesona*, 599 F.2d at 969 ("An aggrieved party is entitled to receive only reasonable and entire compensation, not more than that.").

a reasonable royalty.<sup>115</sup> Lost profits are those profits that would have been made by the patent owner “but for” the infringer’s illegal acts.<sup>116</sup> They are based on the owner’s losses rather than the infringer’s gain.<sup>117</sup> A reasonable royalty is the percentage of the infringer’s sales that would reasonably be paid to the patent owner for the use of the invention if such a royalty rate were negotiated in an arm’s length transaction or based on an established rate.<sup>118</sup> Significantly, the patent owner does not have to demonstrate that the royalty would have actually been paid in the absence of the infringement — it is simply a judicially-created license for each infringing act imposed on the defendant in a fictional, pre-judgment world.<sup>119</sup>

According to 35 U.S.C. § 284, upon a finding of infringement, a reasonable royalty for the use of the patented invention is the baseline award.<sup>120</sup> A patent owner will be entitled to at least that if another uses the invention without authorization. To seek a greater award, a patent owner must demonstrate that a reasonable royalty is not adequate, or more properly, that the award of lost profits is the

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<sup>115</sup> See *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1545 (Fed. Cir. 1995) (en banc) (noting that the patent damages statute allows for the recovery of actual damages while providing for a reasonable royalty as an alternative, lower limit).

<sup>116</sup> *State Indus. v. Mor-Flo Indus.*, 883 F.2d 1573, 1577 (Fed. Cir. 1989) (“To get lost profits as actual damages, the patent owner must demonstrate that there was a reasonable probability that, but for the infringement, it would have made the infringer’s sales.”).

<sup>117</sup> *Kori Corp. v. Wilco Marsh Buggies, Inc.*, 761 F.2d 649, 654 (Fed. Cir. 1985). Note that caution is required in using older private infringement cases as a damages model because, prior to 1946, it was possible for a patent owner to obtain an infringer’s profits as compensation. *King Instr. Corp. v. Perego*, 65 F.3d 941, 947 (Fed. Cir. 1995) (citing *General Motors Corp. v. Devex Corp.*, 461 U.S. 648, 654 (1983)).

<sup>118</sup> See *Trell v. Marlee Elecs. Corp.*, 912 F.2d 1443, 1445 (Fed. Cir. 1990) (quoting *Hanson v. Alpine Valley Ski Area, Inc.*, 718 F.2d 1075, 1078 (Fed. Cir. 1983) (“A reasonable royalty ‘may be based upon an established royalty, if there is one, or if not upon a hypothetical royalty resulting from arm’s length negotiations between a willing licensor and a willing licensee.’”)).

<sup>119</sup> *Fromson v. Western Litho Plate & Supp. Co.*, 853 F.2d 1568, 1574 (Fed. Cir. 1988) (“Determining a fair and reasonable royalty is often, as it was here, a difficult judicial chore, seeming often to involve more the talents of a conjurer than those of a judge. Lacking adequate evidence of an established royalty, the court was left with the judge-created methodology described as ‘hypothetical negotiations between willing licensor and willing licensee.’”).

<sup>120</sup> “Upon a finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty . . .” 28 U.S.C. § 284 (1994).

appropriate measure of damages.<sup>121</sup> However, obtaining lost profits is not as easy as it sounds. Such an award requires that a plaintiff show a "reasonable probability" that the plaintiff would have made the lost sales and corresponding lost profits claimed but for the defendant's infringing acts.<sup>122</sup> Issues such as demand for the patented invention and the plaintiff's capacity to manufacture sufficient quantities of the patented product become central in many complex patent litigations.<sup>123</sup>

Importantly, an award of lost profits or a reasonable royalty is mutually exclusive for a particular incident of infringement.<sup>124</sup> In general, claimants in private patent infringement litigations seek lost profits for as many infringing acts as possible, and settle on a reasonable royalty for everything else.<sup>125</sup>

Particularly in cases where the aggrieved patent owner sells a product covered by the patent, the decision to award lost profits instead of a reasonable royalty can mean a difference of millions of dollars in damages.<sup>126</sup> That is because, in paying a patent owner lost profits, the infringer is essentially paying the full purchase price of the patented product minus the marginal costs (which were already incurred by the infringer in manufacturing the infringing product). A reasonable royalty, on the other hand, presumes that the fictional licensee (the infringer) would retain at least some of the profits from the sale of infringing goods.<sup>127</sup> Therefore, paying lost profits is a

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<sup>121</sup> *Rite-Hite*, 56 F.3d at 1545.

<sup>122</sup> *Grain Processing Corp. v. Am. Maize-Prods. Co.*, 185 F.3d 1341, 1349 (Fed. Cir. 1999).

<sup>123</sup> See *Rite-Hite*, 56 F.3d at 1545 (citing the four-factored test from *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152 (6th Cir. 1978)).

<sup>124</sup> *Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 1223 (Fed. Cir. 1995) (distinguishing between infringing sales for which lost profits were appropriate and those for which a reasonable royalty was proper).

<sup>125</sup> *State Indus. v. Mor-Flo Indus.*, 883 F.2d 1573, 1577 (Fed. Cir. 1989) (award of damages may be split between lost profits as actual damages to the extent they are proven and a reasonable royalty for the remainder).

<sup>126</sup> *Grain Processing*, 185 F.3d at 1353 n.4 (noting that damages based on a reasonable royalty amounted to \$2.4 million, whereas the lost profits requested by the plaintiff would have totaled \$35 million).

<sup>127</sup> See *Trans-World Mfg. Corp. v. Al. Nyman & Sons*, 750 F.2d 1552, 1567 (Fed. Cir. 1984).

significant deterrent to infringement because it confers no advantage over simply purchasing the product from the patent owner.<sup>128</sup>

*B. The Reasonable Royalty "Preference" In the Treatment of Damages for Government Appropriations of Private Patents*

Courts have addressed § 1498 claims using the terminology of private infringement damages.<sup>129</sup> Surprisingly, the question with regard to government patent appropriations is not whether lost profits are ever an appropriate award over a reasonable royalty; the relevant courts acknowledge that lost profits may be allowed in § 1498 actions if the circumstances warrant.<sup>130</sup> In fact, lost profits have actually been awarded in at least three cases of government appropriations of private patent property.<sup>131</sup>

In *Imperial Machine & Foundry Corp. v. United States*,<sup>132</sup> the government was accused of purchasing from a third-party contractor potato-peeling machines that contained elements that infringed the plaintiff's patent. The court found that the government was also a customer of the plaintiff and had purchased the patented devices from the plaintiff as well.<sup>133</sup> The court held that the plaintiff was due lost profits on the sales made to the government by the third-party contractor.<sup>134</sup> In *Waite v. United States*,<sup>135</sup> the court awarded lost profits on the government's infringing use of a transformer portion of an X-ray apparatus. The government awarded to a third-party company a contract for individual infringing transformers as well as several X-ray apparatus containing the transformer. The court found that the government, again, a former customer of the plaintiff, owed the profits the plaintiff

<sup>128</sup> Of course, lost profits do not provide for the loss of the right to control the use of the invention. That is the purpose of injunctive relief. See 35 U.S.C. § 283 (1994).

<sup>129</sup> See CHISUM, *supra* note 45, at § 20.03[6][a].

<sup>130</sup> See, e.g., *Gargoyles, Inc. v. United States*, 113 F.3d 1572, 1576 (Fed. Cir. 1997) ("Since both section 284 and 1498 speak of 'compensation,' . . . lost profits should be recoverable in at least some infringement actions against the government, even though the Fifth Amendment is implicated.")

<sup>131</sup> The cases were brought under the predecessor statute to Section 1498, 35 U.S.C. § 68 (1940). See *supra* note 79.

<sup>132</sup> 69 Ct. Cl. 667 (Ct. Cl. 1930).

<sup>133</sup> *Id.* at 669-70.

<sup>134</sup> *Id.*

<sup>135</sup> 69 Ct. Cl. 153, 158 (Ct. Cl. 1930), *rev'd on other grounds*, 282 U.S. 508 (1931).

lost as a consequence of the third-party contract.<sup>136</sup> And in *Welin Davit & Boat Corp. v. United States*,<sup>137</sup> the court held that the government infringed the plaintiff's patents for improvements on boats. After finding that the government purchased several lifeboats containing the improvements from a third-party contractor, the court awarded the plaintiff the profits it lost on those sales.<sup>138</sup>

Although the above cases clearly support the proposition that lost profits are appropriate in some circumstances, it has been suggested that the age of these cases, along with the fact that lost profits have not been awarded in recent actions, imply that lost profits awards are no longer viable.<sup>139</sup> While the Federal Circuit has dismissed this as a general legal proposition,<sup>140</sup> the fact remains that lost profits have apparently been out of reach to plaintiffs in § 1498 actions since the mid-1930s. Thus, the real issue is whether an environment has developed that makes lost profit damages so much more difficult to obtain than reasonable royalty damages that a prospective litigant cannot realistically expect to receive them in a compensation action against the government. To the extent such an environment exists, it has been fostered by case law suggesting that a reasonable royalty is more appropriate due to the eminent domain character of a § 1498 action.

Without question, compensation in the form of a reasonable royalty for the use of a patented item or method has been awarded in the overwhelming majority of actions under § 1498.<sup>141</sup> Indeed, the Federal Circuit has declared that "the *preferred* manner of reasonably and entirely compensating the patent owner is to require the government to pay a reasonable royalty for its license as well as

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<sup>136</sup> *Id.* at 157-58. The Supreme Court took the case on *certiorari* and reversed the award because it did not include prejudgment interest. 282 U.S. at 508-09.

<sup>137</sup> 78 Ct. Cl. 772, 778 (1934).

<sup>138</sup> *Id.* at 780-81, 787.

<sup>139</sup> CHISUM, *supra* note 45, at § 20.03[6][a].

<sup>140</sup> See *Gargoyles, Inc. v. United States*, 113 F.3d 1572, 1576 (Fed. Cir. 1997).

<sup>141</sup> CHISUM, *supra* note 45, at § 20.03[6][f] (Table containing "a chronological list of reported decisions" that actually adjudicate "reasonable and entire compensation" under 28 U.S.C. § 1498). Note that there may be additional reported cases that do not appear in Professor Chisum's table. For example, *Welin Davit & Boat Corp. v. United States*, 78 Ct. Cl. 772 (1934), which is cited above as an example of a lost profits award, is not listed.



damages for its delay in paying the royalty.”<sup>142</sup> The essence of that statement has been propounded in several cases dating from at least the 1970s, with surprisingly little support.

To the extent that courts have offered an explanation for the reasonable royalty preference, the rationale most often cited appears to be the *Leesona* court’s declaration that certain remedies afforded in the Patent Act are inconsistent with the principles of eminent domain: “A complete congruence between § 1498 and Title 35 would grant plaintiff a recovery in excess of the just compensation required by the Fifth Amendment, and in excess of the reasonable and entire compensation contemplated by Congress with the passage of § 1498.”<sup>143</sup>

In practice, the reasonable royalty preference manifests itself in one of two ways: (1) a multi-tiered damages assessment test with the existence of an established, reasonable royalty as the first, possibly preclusive inquiry and/or (2) a heightened level of proof for lost profits, with a reasonable royalty as the default. When one reviews the relevant decisions more closely, however, it is clear that they are not supported by any general theory of the law of eminent domain.

### 1. *Multi-Tiered Damages Assessment*

Courts following the multi-tiered damages assessment methodology state that, at the outset of the analysis, one must look for evidence of an established royalty rate. If such a royalty rate exists, that rate (which is presumed to be “reasonable”) is to be used as the exclusive measure of damages.<sup>144</sup> Alternatively, if there is no established royalty rate, lost profits may be entertained. Finally, if a recovery of lost profits is not warranted, a court may measure compensation by the willing buyer-willing seller rule for determining a reasonable royalty.<sup>145</sup>

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<sup>142</sup> *Hughes Aircraft Co. v. United States*, 86 F.3d 1566, 1572 (Fed. Cir. 1996) (emphasis added).

<sup>143</sup> *Leesona Corp. v. United States*, 599 F.2d 958, 969 (Ct. Cl. 1979) (en banc).

<sup>144</sup> See, e.g., *Tektronix, Inc. v. United States*, 552 F.2d 343, 347 (Ct. Cl. 1977) (en banc), modified, 557 F.2d 265.

<sup>145</sup> See, e.g., *Dynamics Corp. of Am. v. United States*, 5 Cl. Ct. 591 (Cl. Ct. 1984), *aff’d in part and rev’d in part*, 766 F.2d 518 (Fed. Cir. 1985).

An example of this methodology is provided in *Decca Ltd. v. United States*.<sup>146</sup> In that case, the Court of Claims addressed Decca's claim that the U.S. had infringed its patent rights on a radio navigation system. The court held that a reasonable royalty was the best measure of damages.<sup>147</sup> In assessing the damages owed to Decca, the court acknowledged that three methods were potentially available for valuing the appropriation by the government, including both a reasonable royalty and lost profits.<sup>148</sup> But the court gave a preclusive edge to the reasonable royalty award:

Where (a) *prior* to the time as of which the license taken by the Government is to be valued, the patentee has licensed the infringed patent commercially and (b) the rights of such a commercial licensee are the same or substantially similar to the rights taken by the Government, the court uses, virtually without exception, the reasonable royalty method to value the license taken by the Government.<sup>149</sup>

Because Decca had, in fact, licensed commercially essentially the same patent rights it alleged the government appropriated, the court found that the reasonable royalty award was appropriate.<sup>150</sup>

The significance of the methodology used by the *Decca* court is that, if a patent owner licenses the patent, that owner will most likely be precluded from seeking the profits lost as a consequence of the appropriation. That differs from the scheme used in private patent infringement actions in that an owner's license to a third party is

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<sup>146</sup> 640 F.2d 1156 (Ct. Cl. 1980).

<sup>147</sup> *Id.* at 1167.

<sup>148</sup> *Id.* The other method acknowledged by the court was compensating by awarding a percentage of the governmental cost saving from the governmental use of the patented invention. That method has not been used since *Shearer v. United States*, 101 Ct. Cl. 196 (1944), and it appears to be disfavored by the present-day courts. See, e.g., *Brunswick Corp. v. United States*, 36 Fed. Cl. 204, 209 (1996), *aff'd*, 152 F.3d 946 (Fed. Cir. 1998) (unpublished).

<sup>149</sup> *Decca*, 640 F.2d at 1167.

<sup>150</sup> *Id.* at 1172-73. The methodology adopted by the *Decca* court has been used by other courts addressing similar situations. See, e.g., *Tektronix*, 552 F.2d at 347 ("Where an established royalty rate for patented inventions is shown to exist, that rate will usually be adopted as the best measure of reasonable and entire compensation.").

considered only if actual damages cannot be demonstrated.<sup>151</sup> Such a license may reduce the award of lost profits (because it introduces another competitor into the hypothetical "but for" world), but it does not necessarily preclude it.<sup>152</sup>

It appears, however, that the multi-tiered damages assessment model is supported by nothing more than circular reasoning and tradition. The fact that a reasonable royalty is the presumptive award when there is evidence of a patent owner's commercial license is simply based on the notion that a reasonable royalty is preferable. Nowhere in those decisions that utilize the multi-tiered damages method is there a discussion as to why a reasonable royalty is necessarily closer to eminent domain principles.

## 2. *A Heightened Level of Proof for Lost Profits*

The assertion that lost profits are an appropriate remedy but that the burden of proving them should be higher in § 1498 cases than in private infringement cases stems from a decision of the Court of Claims in *Tektronix Inc. v. United States*.<sup>153</sup> In that case, the court addressed Tektronix's claim for compensation for the United States' infringement of eight of Tektronix's patents relating to oscilloscopes and their electronic circuitry. The court refused to award Tektronix compensation in the form of lost profits because Tektronix failed to sufficiently prove such damages were applicable:

But even if we assume that lost profits is still a viable measure of recovery under 28 U.S.C. § 1498, we cannot adopt that standard in this case

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<sup>151</sup> *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1544 (Fed. Cir. 1995) (en banc) ("A patentee is entitled to no less than a reasonable royalty on an infringer's sales for which the patentee has not established entitlement to lost profits. . . . The royalty may be based upon an established royalty, if there is one, or if not, upon the supposed result of hypothetical negotiations between the plaintiff and defendant.") (citing *Hanson v. Alpine Valley Ski Area, Inc.*, 718 F.2d 1075, 1078 (Fed. Cir. 1983)).

<sup>152</sup> See *Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 1223 (Fed. Cir. 1995) (finding an award of 25% lost profits and 75% reasonable royalty appropriate for the period of time following a license induced by litigation settlement). See also *Bandag, Inc. v. Gerrard Tire Co.*, 704 F.2d 1578, 1582 (Fed. Cir. 1983) ("It was long ago resolved that a license fee represents the proper measure of damages only where the defendant's infringing acts are commensurate with those acts contemplated under the license for which the fee has been established.") (citing 3 W. C. ROBINSON, *THE LAW OF PATENTS* § 1058 (1890)).

<sup>153</sup> 552 F.2d 343 (Ct. Cl. 1977).

because it has not been sufficiently shown by *clear and convincing evidence* that plaintiff . . . would have made and kept the profits it now demands.

\* \* \* \*

If lost profits are ever to be awarded under § 1498, it should be only after the *strictest proof* that the patentee would actually have earned and retained those sums in its sales to the Government.<sup>154</sup>

In dicta, the court also stated that, even if conclusively proven, lost profits would have amounted to "excessive compensation" rather than the just compensation required by the Fifth Amendment.<sup>155</sup>

Whether the "strictest proof" standard from *Tektronix* is the same as "clear and convincing" is not entirely clear in the decision. But it does appear that the court meant to articulate a higher burden than the "reasonably probable" standard that exists in private infringement litigations. That higher § 1498 burden has been used by a number of courts as a basis for stating that lost profits are not preferred in § 1498 actions.<sup>156</sup>

Significantly, the Federal Circuit has not clearly adopted the heightened *Tektronix* standard.<sup>157</sup> In *Gargoyles, Inc. v. United States*,<sup>158</sup> the court addressed a plaintiff's appeal from a Court of Federal Claims decision which awarded a reasonable royalty but denied lost profits for the government's infringement of its patent for protective eyewear. The trial court applied the higher standard of proof to Gargoyles' claim for lost profits. Although the Federal Circuit affirmed the trial court's decision because lost profits were not appropriate under even the lower standard used in private infringement actions,<sup>159</sup> the Federal Circuit cast doubt on the applicability of the *Tektronix* standard:

*Tektronix*, however, antedates both *Panduit* and *Rite-Hite*, both of which clarified the law pertaining to lost profits in private damages cases. . . . While *Rite-Hite* clearly only discusses section 284, which contains language

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<sup>154</sup> *Id.* at 349 (emphasis added).

<sup>155</sup> *Id.*

<sup>156</sup> See, e.g., *Standard Mfg. Co. v. United States*, 42 Fed. Cl. 748, 758 (Fed. Cl. 1999); *Penda Corp. v. United States*, 29 Fed. Cl. 533, 573 (Fed. Cl. 1993).

<sup>157</sup> Although the decision is binding precedent until overruled by an *en banc* panel of the Federal Circuit. See *supra* note 83.

<sup>158</sup> 113 F.3d 1572 (Fed. Cir. 1997).

<sup>159</sup> *Id.* at 1577.

different from section 1498, Gargoyles is reasonable in speculating on the continued viability of the vague language of "strict proof" in *Tektronix* and the "clear and convincing" proof standard discussed therein . . . with respect to the less litigated section 1498 actions.

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We also note that the announcement of the "strictest proof" standard in *Tektronix* is supported only by general references to the Fifth Amendment and the court's reticence to award lost profits against the government . . . .<sup>160</sup>

Thus, the heightened standard may be receiving more scrutiny in the future, and its continued viability as a special test for lost profits in § 1498 actions is open to question. And so it should be. The requirement for heightened proof for lost profits damages in the context of § 1498 actions is as unsupported in eminent domain doctrine as the multi-tiered damages assessment method.

*C. Indirect Infringement: Another Important Limitation on Damages Awards Under § 1498*

As stated above, compensation awarded under 28 U.S.C. § 1498 is not coextensive with damages awarded under the Patent Act in many respects. In addition to the type of award allowed (*e.g.*, damages but not an injunction), courts have found that § 1498 does not allow recovery from all of the same *types* of infringement as the Patent Act.<sup>161</sup> A patent owner may only recover under § 1498 if the government is a direct infringer under 35 U.S.C. § 271(a).<sup>162</sup> However, if the government acts as a contributory infringer or induces another to infringe, § 1498 provides no relief because it is

<sup>160</sup> *Id.* at 1576.

<sup>161</sup> "The jurisdiction of the Court of Federal Claims is prescribed by the metes and bounds of the United States' consent to be sued in its waiver of immunity." RHI Holdings, Inc. v. United States, 142 F.3d 1459, 1461 (Fed. Cir. 1998).

<sup>162</sup> *Decca Ltd. v. United States*, 640 F.2d 1156, 1168 (Ct. Cl. 1980). Interestingly, in a recent case from the Court of Federal Claims, the court held that § 1498 does not even necessarily incorporate all types of *direct* infringement as currently prescribed in 35 U.S.C. § 271(a) (1994 & Supp. V 1999), but only those that would have constituted direct infringement as of the enactment date of § 1498. *Zoltek Corp. v. United States*, 51 Fed. Cl. 829, 837 (Fed. Cl. 2002) ("Because nothing in the legislative history indicates that Congress intended for the meaning and effect of section 1498 to change in congruence with changes in 35 U.S.C. § 271, the Court is constrained to hold that section 1498 does not apply to all forms of direct infringement as currently defined in 35 U.S.C. § 271.").

viewed as a limited waiver of sovereign immunity that encompasses only direct infringement.<sup>163</sup>

The limitation to direct infringement could be extremely important in certain arts, particularly those involving products protected by pharmaceutical or biotechnology-related patents. That is because many such products are protected by patents on the method of action within the body or methods of administration instead of composition patents (whether because the composition was in the public domain or protected by a patent already expired).<sup>164</sup> Methods such as these are carried out by the end user (*e.g.*, a doctor in private practice or a patient) and the supplier (*e.g.*, the government) would be liable only as a contributory infringer or for inducing infringement under 35 U.S.C. § 271(b) and (c), respectively. Thus, the government may be able to appropriate such patented inventions by use of its eminent domain powers but the respective patent owners are left with essentially no remedy. Although this seems manifestly unfair, it is the current statutory scheme, and an act of Congress would appear to be required to change the situation.<sup>165</sup>

#### IV. BRINGING § 1498 COMPENSATION MORE CLOSELY IN LINE WITH DAMAGES IN PRIVATE INFRINGEMENT ACTIONS

If one accepts that the just compensation requirements of the Fifth Amendment provide the basic framework for remedying government

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<sup>163</sup> *Id.* ("Activities of the Government which fall short of direct infringement do not give rise to governmental liability because the government has not waived its sovereign immunity with respect to such activities."); *Gargoyles, Inc. v. United States*, 113 F.3d 1572, 1581 (Fed. Cir. 1997) ("the government has not waived sovereign immunity for collateral acts like inducement and contributory infringement"); *Motorola, Inc. v. United States*, 729 F.2d 765, 768 n.3 (Fed. Cir. 1984) ("Further, the Government can only be sued for any direct infringement of a patent (35 U.S.C. § 271(a)), and not for inducing infringement by another (section 271(b)) or for contributory infringement (section 271(c)).").

<sup>164</sup> This type of patent protection has actually been a bone of some contention because of the potential to "extend" patent protection. See Marcia Angell & Arnold S. Relman, *Prescription for Profit*, WASH. POST, June 20, 2001, at A27.

<sup>165</sup> Interestingly, this is apparently the situation that existed prior to the Act of 1910 with respect to direct infringement. At that time, there was some discussion as to whether the statute now codified as 28 U.S.C. § 1491 (1994 & Supp. V 1999), which provides jurisdiction for, *inter alia*, claims against the government founded on the Constitution, could have provided relief to aggrieved patent owners. Before that question was answered, the more specific predecessor to Section 1498 was passed. See *Leesona Corp. v. United States*, 599 F.2d 958, 966 (Ct. Cl. 1979) (*en banc*).

patent appropriations, the courts' compensation methods to date must be modified. Under the scheme etched out by the current case law, the courts have created a kind of Catch-22 by establishing a preference for the reasonable royalty remedy that ensures lost profits will rarely be awarded, and then justifying the preference with the fact that a reasonable royalty is most often found to be the best form of compensation.<sup>166</sup> In fact, lost profits are as justified as a reasonable royalty in terms of adherence to eminent domain law. Additionally, disfavoring lost profits may create a disincentive for innovation in the fields primarily affected by government appropriations.

*A. An Award of Lost Profits in Certain Circumstances is Consistent with Eminent Domain Doctrine*

The award of lost profits has always been premised on the attempt to fully compensate a patent owner for actual monetary losses occurring as a result of infringement.<sup>167</sup> The Fifth Amendment requires no less with regard to damages suffered as a result of a taking. The Supreme Court has noted that "just compensation means the *full* monetary equivalent of the property taken"<sup>168</sup> and that "The owner is to be put in the same position monetarily as he would have occupied if his property had not been taken."<sup>169</sup> That is the same standard that justifies the award of lost profits.<sup>170</sup> In cases addressing takings of real property, which is generally qualified by its "market value," the owner is entitled to the fair market value of its

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<sup>166</sup> See *supra* Part III.B.

<sup>167</sup> *General Motors Corp. v. Devex Corp.*, 461 U.S. 648, 654-55 (1983) ("Congress sought to ensure that the patent owner would in fact receive full compensation for 'any damages' he suffered as a result of the infringement.")

<sup>168</sup> *Almota Farmers Elevator & Warehouse Co. v. United States*, 409 U.S. 470, 473 (1973) (emphasis added).

<sup>169</sup> *United States v. Reynolds*, 397 U.S. 14, 16 (1970); see also RICHARD A. EPSTEIN, *TAKINGS: PRIVATE PROPERTY AND THE POWER OF EMINENT DOMAIN* 182 (1985) ("In principle the ideal solution is to leave the individual owner in a position of indifference between the taking by the government and retention of the property.")

<sup>170</sup> See *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 507 (1964) (plurality opinion) (The statutory measure of damages is "the difference between [the patent owner's] pecuniary condition after the infringement, and what his condition would have been if the infringement had not occurred."); accord *Grain Processing Corp. v. Am. Maize-Prods. Co.*, 185 F.3d 1341, 1350 (Fed. Cir. 1999).

property at the time of the taking.<sup>171</sup> Patents and other intellectual property are more easily valued in terms of their income.<sup>172</sup> Thus, the full monetary value of a patent should include the income the owner could reasonably expect to make from it — including profits on sales of products covered by the patent<sup>173</sup> — and that owner should be compensated if deprived of those profits by a government appropriation.

In order to distinguish typical patent damages from the compensation required by § 1498, much has been made of the fact that private infringement is a tort, a wholly different animal than eminent domain and the Fifth Amendment. That is certainly true with regard to the doctrinal origins of the two branches of law, but as to the actual damages, distinguishing the two makes sense only with regard to the punitive<sup>174</sup> and injunctive<sup>175</sup> aspects of tort relief, neither of which are permitted as compensation for takings. It does not follow that eminent domain compensation, based on the actual losses of the property owner, must be calculated as something other than actual damages in the context of patent takings.

Why then have so many courts expressed disfavor with the lost profits remedy? The most repeated rationale for such a distinction is that lost profits presume exclusivity, and one cannot view property rights as exclusive against the government in view of its eminent domain powers.<sup>176</sup> To rephrase the basic premise: lost profits are a remedy for the infringement of one's *exclusive* right to make, use, sell or offer to sell that which is patented, and such a remedy against the

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<sup>171</sup> *City of New York v. Sage*, 239 U.S. 57, 61 (1915) ("But what the owner is entitled to is the value of the property taken, and that means what it fairly may be believed that a purchaser in fair market conditions would have given for it in fact . . ."); see also *United States v. Reynolds*, 397 U.S. 14, 16 (1970).

<sup>172</sup> See GORDON V. SMITH & RUSSELL L. PARR, *VALUATION OF INTELLECTUAL PROPERTY & INTANGIBLE ASSETS* 170 (3d ed. 2000) ("The income approach is best suited for the appraisal of . . . Patents, trademarks, and copyrights . . .").

<sup>173</sup> See *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1545 (Fed. Cir. 1995) (en banc); *Grain Processing*, 185 F.3d at 1350.

<sup>174</sup> See 35 U.S.C. § 284 (Supp. V 1999) ("the court may increase the damages up to three times the amount found or assessed.").

<sup>175</sup> See 35 U.S.C. § 283 (1994).

<sup>176</sup> See CHISUM, *supra* note 45, at § 20.03[6], n.12 ("The award of lost profits assumes a right to exclusivity. The eminent domain theory of Section 1498(a) — allowing the United States to take a license under the patent for use or procurement — is at odds with such a right of exclusivity.").



government is inappropriate because the government has a mandatory "license" to use the patented property when the public good so demands.<sup>177</sup> However, that rationale is not actually part of eminent domain law as it has been developed in other contexts (particularly, real property law) and it is difficult to understand why eminent domain should be applied differently in a patent context.

First, the idea that the law of eminent domain itself presumes that property owners recognize the government has what amounts to an implied license for the use of all property within its domain is simply incorrect. The presumption inherent in eminent domain doctrine is that a property owner *does* have exclusive domain over his or her property,<sup>178</sup> but that the government can override that exclusivity based on the higher power of the sovereign state. The requirement and degree of compensation in such a circumstance is based, in part, on the damage incurred as a consequence of the government's breach of the property owner's exclusivity. There is no special discount given to the government in recognition of the fact that it has some preexisting license to take property.<sup>179</sup> In real property law, it is fundamental that the right to exclude is an essential part of the value of property, and eminent domain compensation may be based solely on the damages caused by the government's infringement of this right; compensation is awarded to the full extent of that infringement.<sup>180</sup>

Second, even if one believes that eminent domain law is hostile to "exclusive" property rights, the notion that an award of lost profits presumes exclusivity but that a reasonable royalty does not is wrong.

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<sup>177</sup> See *id.*; *Brunswick Corp. v. United States*, 36 Fed. Cl. 204, 208 (Fed. Cl. 1996) ("given the absence of a reasonable expectation of exclusivity, lost profits are *a fortiori* inappropriate"), *aff'd*, 152 F.3d 946 (Fed. Cir. 1998) (unpublished).

<sup>178</sup> In fact, it is fair to say that the right to exclude defines property. *Carl Schenck, A.G. v. Nortron Corp.* 713 F.2d 782, 786 (Fed. Cir. 1983) ("The patent right is but the right to exclude others, the very definition of 'property.'").

<sup>179</sup> See *Bendix Corp. v. United States*, 676 F.2d 606, 607-08 (Ct. Cl. 1982) (per curiam) (disparaging the trial judge's assertion that "the government is allowed to infringe at a cheaper rate than a private infringer would be.").

<sup>180</sup> See *Kaiser Aetna v. United States*, 444 U.S. 164, 179-80 (1979) (finding that the government's plan to force the owner of a private pond to allow access to the public would constitute a taking and stating "In this case, we hold that the 'right to exclude,' so universally held to be a fundamental element of the property right, falls within this category of interests that the Government cannot take without compensation.").

In fact, exclusivity is an essential factor in determining a reasonable royalty. That is why courts have been quite clear in cautioning that the calculation of a reasonable royalty should not place too much emphasis on the characterization of the patent owner as a "willing licensor" — it constitutes a pretense that the infringement (taking) never happened and an actual license was negotiated.<sup>181</sup> Thus, one of the factors that courts traditionally consider in determining a reasonable royalty is "The licensor's established policy and marketing program to maintain his patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly."<sup>182</sup> These factors are applied in determining reasonable royalties in § 1498 cases.<sup>183</sup> It is therefore counterintuitive to distinguish lost profits and reasonable royalties on this basis.

In one opinion, the United States Court of Claims itself explicitly noted that eminent domain concepts suggest that compensation under § 1498 should be the same in its "non-punitive" aspects as a damages award in a private infringement action. In *Bendix Corp. v. United States*,<sup>184</sup> the court reviewed the trial judge's award of a reasonable royalty for the government's appropriation of a fuel metering control system for jet engines. While affirming the award, the Court of Claims disparaged and removed from the trial judge's findings the assertion that the royalty rate applied to the government was appropriately less than would be applied to a private infringer.<sup>185</sup> The court stated:

Insofar, however, as the awards against the private infringer, and against the government taker, both would apply to the same unauthorized, unlicensed uses of a patented invention, and are both nonpunitive, and both undertake only to assess reasonable and entire compensation for the interest taken or infringed, the results ought to be similar, just as the awards in many land taking cases would have been no more or less if they had been trespass cases.<sup>186</sup>

<sup>181</sup> See, e.g., *TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 900 (Fed. Cir. 1986).

<sup>182</sup> *Georgia-Pacific Corp. v. United States Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970), *modified and aff'd*, 446 F.2d 295 (2d Cir. 1971).

<sup>183</sup> See, e.g., *Gargoyles, Inc. v. United States*, 113 F.3d 1572, 1580 (Fed. Cir. 1997).

<sup>184</sup> 676 F.2d 606 (Ct. Cl. 1982) (*per curiam*).

<sup>185</sup> *Id.* at 607-08.

<sup>186</sup> *Id.*

The court's affirmation of the royalty rate was based on its independent determination that it satisfied the "reasonable and entire" requirement.<sup>187</sup>

Eminent domain compensation is clearly more consistent with traditional methods of calculating patent damages than with the method the courts seem inclined to use, having the albatross of a reasonable royalty preference around its neck. Both the Fifth Amendment and 35 U.S.C. § 284 seek to provide full compensation for the damage to property.<sup>188</sup> It is time for the courts to recognize that the stripped-down compensation rules that have been applied in § 1498 cases must give way to the full compensation that Congress originally intended. That recognition provides for a more rational doctrinal development of the law which necessarily contributes to its economic rationality.

*B. An Award of Lost Profits in Certain Circumstances is Consistent With the Economic Goals of the Fifth Amendment and the Patent System*

From an economic perspective, it is important that compensation for appropriated patent rights be awarded at the same level as those which are litigated in a private infringement action. Such treatment serves as a significant check on eminent domain powers. Additionally, it ensures takings will have the least negative impact on the patent system's overall goal of promoting the progress of the useful arts.

1. *The Eminent Domain Corral*

The primary purpose of the Fifth Amendment's just compensation clause was to ensure the federal government would respect private property and refrain from unfairly shifting the costs of the nation onto

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<sup>187</sup> *Id.*

<sup>188</sup> Although 35 U.S.C. § 284 uses the phrase "adequate compensation," the courts have been very clear that the phrase means the same thing as "full compensation." See *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1544-45 (Fed. Cir. 1995) (en banc) (citing *General Motors Corp. v. Devex Corp.*, 461 U.S. 648, 654 (1983)) ("Thus, while the statutory text states tersely that the patentee receive 'adequate' damages, the Supreme Court has interpreted this to mean that 'adequate' damages should approximate those damages that will fully compensate the patentee for infringement.").

a few unlucky property owners.<sup>189</sup> Imposing a mandatory cost to taking property that theoretically places the property owner in as good a position as before the taking furthers this goal by (1) making sure the government pays the going rate for property so it does not have an incentive to use the taking power instead of a market transaction with a rational property owner and (2) guaranteeing that a property owner does not bear a disproportionate amount of the cost of benefiting the public good. These economic controls on the eminent domain power are essential to its most efficient and fair employment.

In his text on economics and the law, Professor and Circuit Court Judge Richard Posner proposes that the curb on government overuse of the taking power actually provides the simplest economic explanation of the Just Compensation requirement's existence.<sup>190</sup> Without it, the government has an incentive to substitute private property for other inputs that are socially cheaper but more expensive to the government.<sup>191</sup> Without a requirement that full compensation be paid, the obvious incentive for the government is to take private property for a short term benefit to society but to the detriment of the patent owner.

Similarly, the point that the government must pay full compensation in order to make efficient choices for the public good has been recognized by other authors in the context of real property.<sup>192</sup> It is not difficult to extend<sup>193</sup> the basic economic principles to takings of patent property and see the same results.<sup>194</sup> There is no reason to

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<sup>189</sup> See Treanor, *supra* note 69.

<sup>190</sup> RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 58-59 (4th ed. 1992).

<sup>191</sup> *Id.*

<sup>192</sup> See, e.g., MICELI, *supra* note 70, at 140-45; B. Hermlin, *An Economic Analysis of Takings*, 11 J. LAW, ECON. & ORG. 64, 64-86 (1995).

<sup>193</sup> Unfortunately, such an in-depth economic analysis has not been conducted in the patent takings area to date, so extrapolation is necessary.

<sup>194</sup> Take, for example, a simple real property analysis from Judge Posner's book (POSNER, *supra* note 190, at 58) and substitute patent property: Let us assume that the wholesale cost in the United States of treating an individual with a certain anti-anthrax antibiotic is \$200 per month (prices for illustration purposes only). Next, assume that there are 10,000 people who could possibly benefit from treatment with the antibiotic, but for a cost of \$1 million (screening, investigating, etc.), the government could make a much more accurate determination of the affected number of people and cut the number of treated individuals to 1,000. If the government must pay the market price for the antibiotic, the cost to both the government and society as a whole — which includes the patent owner — under the cheaper

assume that the compensation outcome should be dramatically different in the context of intangible assets and it is quixotic that such an assumption seems so firmly rooted in the courts.

## 2. *The Innovation Incentive*

Of central importance to the U.S. patent system is the grant of an exclusive property right as an incentive to innovate. The presumption inherent in the system is that if the patent property right is weakened or more subject to appropriation, the incentive is reduced and innovation will suffer or at least be redirected away from the patent system (assuming the change is significant enough that innovators appreciate the effect on patent rights).<sup>195</sup>

The innovation incentive inherent in the patent system is fairly intuitive, and its real effects have been noted.<sup>196</sup> The reason the patent property right promotes investment is easily understood: companies desire to make investment decisions that will lead to an advantage over competitors in the marketplace, which leads, in turn, to increased profitability.<sup>197</sup> When the expected return<sup>198</sup> on invest-

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screening option will be \$1.2 million (\$1 million screening + \$200 x 1000 people). Alternatively, if the government can appropriate the anti-anthrax antibiotic and pay only the generic cost (assume it is 10 cents on the dollar), the total cost to the government if it chooses to forego the screening option will be \$200,000 (\$20 x 10,000 people), but the cost to society as a whole is \$2 million (\$200 x 10,000 people). Obviously, this example oversimplifies many issues, but it is useful in creating a common framework.

<sup>195</sup> For example, an innovative company may choose to pour its resources into research that can be protected as trade secrets. See POSNER, *supra* note 190, at 38-39.

<sup>196</sup> See, e.g., Sunil Kanwar & Robert Evenson, *Does Intellectual Property Protection Spur Technological Change?*, Center Discussion Paper No. 831, Economic Growth Center, Yale University (June 2001), available at <http://www.econ.yale.edu/~egcenter/research.htm> (concluding that intellectual property protection has a strong positive association with research and development investment).

<sup>197</sup> See Robert P. Merges, *Uncertainty and the Standard of Patentability*, 7 HIGH TECH. L.J. 1, 10-11 (1993).

<sup>198</sup> The "return" a patent can confer on its owner is not restricted to a direct income stream; it may instead take the form of, e.g., providing a more powerful market position or a useful negotiating chip for cross-licensing purposes. See SMITH & PARR, *supra* note 172, at 222 (discussing "indirect techniques" of assessing an intellectual property asset's contribution to earnings). Thus, a patent need not be profitable, *per se*, to provide a valuable return to its owner. Regardless, any return is based on the exclusivity a patent provides, and it is the loss of that exclusivity that devalues the patent.

ment is reduced, the incentive to make future investments naturally decreases.

The relationship between incentives and investment has also been described in the context of eminent domain law. When fear of uncompensated government takings causes one to refrain from investing in property ownership, one is demoralized.<sup>199</sup> This demoralization can be quantified as a "demoralization cost" which is part of the overall cost of the use of the eminent domain power without compensation.<sup>200</sup> Specifically, demoralization costs are the costs of (1) offsetting the disutilities which accrue to property losers from the realization that no compensation is offered and (2) the present capitalized dollar value of lost future production caused by the demoralization of uncompensated property owners subject to takings.<sup>201</sup> In many ways, demoralization costs are the inverse of the innovation incentive on which the patent system was founded.

To put this in the specific context of government takings of patent property rights, a rule creating a disadvantaged compensation scheme for government appropriated patents would be perceived as weakening the intellectual property right for affected arts. If government takings (or at least fears related to them) became sufficiently widespread, one would expect to see a reduction in investment in research and development in those technologies that are most affected.<sup>202</sup> Particularly disturbing about this expected result is that, if the government uses its eminent domain powers to appropriate patent rights in technologies related to important health or safety concerns (*e.g.*, pharmaceuticals, anti-terrorism technologies, etc.), one would expect to see a corresponding reduction in investment and innovation

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<sup>199</sup> Frank I. Michelman, *Property, Utility, and Fairness: Comments on the Ethical Foundations of "Just Compensation" Law*, 80 HARV. L. REV. 1165, 1214-18 (1967).

<sup>200</sup> *Id.*

<sup>201</sup> *Id.*

<sup>202</sup> Note that this reduction in innovation is the aggregate effect of a government policy of insufficiently compensating patent owners for takings. One (or very few and isolated) poorly-compensated government takings of private patent rights would likely have little effect on innovation in general, or even within the industry specifically affected. Obviously, the decision to invest in research and development is complex and generally based on more than the expectation of return from a single patent. See KEVIN RIVETTE & DAVID KLINE, REMBRANDTS IN THE ATTIC 106-13 (2000), for an excellent discussion of planning corporate research and development with patent assets in mind.

in these very fields.<sup>203</sup> In other words, by appropriating important inventions to save short term costs in dealing with a national emergency, the government may be cutting off the public's proverbial nose to spite its face by discouraging long-term investment and innovation in those key technologies. That short-sighted, dangerous policy has a real chance of developing because of its "of-the-moment" attractiveness. All the more justification for the courts to refocus and follow the private infringement damages scheme.

### *C. Cipro® Redux*

How does the private infringement damages analysis fare in a real world example? The above compensation scheme can be applied to the ciprofloxacin scenario and used to predict the resulting type of compensation. Although one must be cautious about focusing too much on the effects of one specific incident, it is worth considering the possible outcome to the story which caused such a stir in the first place.

Imagine that the deal struck between the U.S. Government and Bayer for the increased production of ciprofloxacin at a reduced price never happened. Assume instead that, before the expiration of Bayer's ciprofloxacin-related patent rights, the U.S. Government ceased purchasing ciprofloxacin from Bayer and procured a large amount of less expensive ciprofloxacin from generic pharmaceutical manufacturers.<sup>204</sup> If Bayer sued under § 1498, what would be the

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<sup>203</sup> Those familiar with the study and practice of international law may find this effect analogous to the disincentive a company has to make investments in real property located in a foreign country in which the risk of "nationalization" of private property is significant.

<sup>204</sup> During the actual Cipro® controversy, Health and Human Services attorneys were apparently concerned about the possibility that generic ciprofloxacin would not be approved by the FDA in view of the restrictions of the Hatch-Waxman Act. See Matt Fleischer-Black, *The Cipro Dilemma*, AM. LAW., Jan. 9, 2002. However, that concern is probably unfounded. The thirty-month period of exclusivity patent owners receive when a potential infringer certifies under 21 U.S.C. § 355(j)(2)(A)(vii)(IV) (1994) its belief that a listed patent is invalid or its generic product does not infringe (a so-called Paragraph IV certification) can be overridden by a judicial determination of invalidity or non-infringement. 21 U.S.C. § 355(j)(5)(B)(iii) (Supp. V 1999). Because, in the case of a government appropriation, § 1498 provides the generic manufacturer with a clear and simple defense to infringement, such a court determination would likely be made very quickly. See *Crater Corp. v. Lucent Tech., Inc.*, 255 F.3d 1361, 1364 (Fed. Cir. 2001) ("If a patented invention is used or manufactured for the government by a private party, that private party cannot be held liable for patent infringement.") (citing *Trojan, Inc. v. Shat-R-Shield, Inc.*, 885 F.2d 854, 856 (Fed. Cir. 1989), cert. denied, 122 S.Ct. 1952 (May 13, 2002)).

probable result?

Because Bayer has been selling Cipro® in this country to both the public and the government for a higher, branded price, it would seem very likely that Bayer would be able to obtain the profits it lost on the amount of Cipro® it could have (and would have)<sup>205</sup> supplied in response to the government's request.<sup>206</sup> Assuming that Bayer would not have had the capacity to manufacture all of this hypothetical order, Bayer would still be entitled to receive a reasonable royalty on the rest of the purchase. Such a result would make the government's "overriding" of Bayer's patent an extremely expensive prospect; in essence, it would require a double payment for each ciprofloxacin tablet — one payment to Bayer and one to the generic pharmaceutical manufacturer that actually made the drug.

Is this the optimal result? In view of the goals of the Fifth Amendment and the patent system, it is. The increased cost is exactly the disincentive that is supposed to induce the government to deal in good faith with the property owner first. The government obtains no windfall from appropriating the patent and Bayer is not singled out to sacrifice its investment in its patent property rights for the benefit of society.<sup>207</sup> This does not unduly hamper the government in such a crisis, but merely forces it to allocate the appropriate finances to address the real costs of undertaking a patent appropriation (remem-

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<sup>205</sup> Lost profits probably would not be available for a patent owner who outright refused to sell to the government, because those would not be sales that would have been made "but for" the infringement.

<sup>206</sup> One cannot actually be that definite because lost profits determinations are, in reality, extremely complex. This is because they require consideration of a hypothetical world in which events causing an increase or decrease in lost profits could have occurred, even though they did not occur. See *Grain Processing Corp. v. Am. Maize-Prods. Co.*, 185 F.3d 1341, 1350 (Fed. Cir. 1999) ("Reconstructing the market, by definition a hypothetical enterprise, requires the patentee to project economic results that did not occur."). For example, the government might be able to convincingly argue that, if it were not able to purchase ciprofloxacin from generic manufacturers, it would have pushed forward the approval of other antibiotics for the treatment of inhalation anthrax, thus cutting off Bayer's sales.

<sup>207</sup> While, at first, the double payment seems at odds with the traditional just compensation rules in real property law, it actually is consistent. It would be akin to a situation wherein the government takes private farm land on which a crop is growing and turns control of it to another private farmer who then harvests the crop for the state at a profit. In that situation, the government would be liable to the original owner under the Fifth Amendment for the cost of the land as well as the profits from the harvest and to the private farmer who harvests the land under a contract theory for the price of the crop.



ber that the government cannot be enjoined from using the technology). Conversely, Bayer is not given a reason to reconsider the magnitude of its investment in health care-related intellectual property due to the fear that the government may at some point deem it too important to fully protect with private patent rights. While it also means that the government would not be able to use the threat of eminent domain as a negotiating tool to reduce the price of Cipro®,<sup>208</sup> such a power does not fit with the Fifth Amendment's just compensation protections and it is out of place, regardless of the useful public policy goals it seems to further.

#### V. PENDING LEGISLATION MAY BE MORE DISRUPTIVE THAN HELPFUL

Perhaps hoping to prevent the government from becoming entangled in court cases that raise the above issues related to § 1498 compensation, Congress is considering legislation that would provide a separate compensation scheme for certain government patent appropriations. Currently pending in the House is a bill, known as the Public Health Emergency Medicines Act, H.R. 3235, which seeks to modify the current system specifically for patents on technology "needed to address a public health emergency."<sup>209</sup> The bill purports to create a "compulsory license" system in emergency situations, the compensation for which is determined by the Secretary of Health and Human Services.

Because the government's eminent domain powers already create what is essentially a compulsory license system,<sup>210</sup> the real impact of the bill is to change the current compensation rules in certain circumstances.<sup>211</sup> Although the bill states that "reasonable compensation" will be paid to patent owners subject to the taking, it partially defines "reasonableness" by providing a set of factors that may be considered by the Secretary of Health and Human Services in

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<sup>208</sup> See *supra* note 52.

<sup>209</sup> See *supra* note 107.

<sup>210</sup> See H.R. 3235, *supra* note 107.

<sup>211</sup> It does not appear that the bill would replace § 1498, but rather supplement it by carving out a scheme for "public emergency" patent appropriations.

determining compensation.<sup>212</sup> These factors are somewhat vague, but to the extent their intent can be derived, they appear to be directed more toward providing a means of controlling patent owners perceived to have too much power (*e.g.*, factor 8: "the need to correct anti-competitive practices") rather than providing full compensation for the appropriation.

At first blush, this bill (and others of similar ilk) appear to provide the same short term benefits sought by those seeking to take advantage of the reasonable royalty preference in § 1498 case law without the cloudy doctrinal concerns detailed above. Fifth Amendment protections, of course, trump such legislation with regard to existing patents to the extent that there are any inconsistencies.<sup>213</sup> But, as discussed above,<sup>214</sup> prospectively limiting protection for future patent grants is perfectly permissible, even if it means allowing the government to appropriate for less than "just compensation." There is a real danger in doing so, however. If legislation of this type is enacted, it may provide a major disincentive to innovate in any area that may be subject to "public health emergency" takings. To compensate, the government may be forced to offer additional incentives to convince

<sup>212</sup> See H.R. 3235, *supra* note 107. The text of the current bill states, in part:  
SEC. 2. COMPULSORY LICENSING OF PATENTED INVENTIONS

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(b) COMPENSATION FOR USE OF A PATENT - In exercising the right under subsection (a) to authorize other use of the subject matter of a patent, the right holder shall be paid reasonable remuneration for the use of the patent. In determining the reasonableness of remuneration for the use of a patent, the Secretary of Health and Human Services may consider—

- (1) evidence of the risks and costs associated with the invention claimed in the patent and the commercial development of products that use the invention;
- (2) evidence of the efficacy and innovative nature and importance to the public health of the invention or products using the invention;
- (3) the degree to which the invention benefited from publicly funded research;
- (4) the need for adequate incentives for the creation and commercialization of new inventions;
- (5) the interests of the public as patients and payers for health care services;
- (6) the public health benefits of expanded access to the invention;
- (7) the benefits of making the invention available to working families and retired persons;
- (8) the need to correct anti-competitive practices; or
- (9) other public interest considerations.

<sup>213</sup> See *supra* note 39.

<sup>214</sup> See *supra* Part II.A.

companies to take such risks. Even subsidizing research may be necessary if the fear of sub-compensated appropriation is great enough.

In the end, while such bills are politically popular and promote the public policy of lowering health care costs, they are likely to do more harm in the long run than good. It is better to apply the same compensation rules that apply to other types of property rather than carve out areas for special consideration, creating disadvantaged step-children of an otherwise successful family of intellectual property interests.

## VI. CONCLUSION

Under the current statutory scheme, unauthorized government appropriations of private patent rights should be treated as eminent domain takings, compensable at the level required by the Fifth Amendment to the U.S. Constitution. Moreover, Fifth Amendment compensation for patent takings is properly calculated by the same rules employed to assess non-punitive, actual damages in private infringement actions. Such rules best adhere to the eminent domain underpinnings of the government's right to appropriate patents. Additionally, private infringement damages rules preserve the innovation incentives that the Patent Act is intended to foster. Courts addressing claims against the government for patent appropriation should immediately dispose of rules creating a preference for more limited damages in the form of a reasonable royalty and adopt the private infringement model of assessing a compensation remedy. Proposed legislation meant to alter this system and further limit the compensation due an aggrieved patent owner is unnecessary at this time and potentially harmful in the long term.