

# Patent Infringement Damages in Japan and the United States: Will Increased Patent Infringement Damage Awards Revive the Japanese Economy?

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## INTRODUCTION

Since the Japanese economy plunged into its current, deep recession, the Japanese government has been looking for measures to revive its economy. Reviewing United States legislation in the 1980s and early 1990s, Japan's Ministry of International Trade and Industry (MITI) and its agency, the Japanese Patent Office (JPO), were convinced that the pro-patent policy and other legislation that encouraged technology transfer were the primary reasons for the United States' recovery from its recession.<sup>1</sup> To follow the United States example, the government organized the Commission on Intellectual Property Rights in the Twenty-First Century. In its report, published in April 1997, the Commission emphasized the need to strengthen intellectual property rights in order to promote the development of breakthrough technologies.<sup>2</sup>

Since then, MITI and the JPO have changed their intellectual property policies in order to make them more IP owner-friendly. Japanese patent law traditionally gave more weight to public interests, particularly competitors' rights to design around existing patents, than to patent owners' interests. The Commission on

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1. INDUSTRIAL PROPERTY RIGHT COMMITTEE, JAPANESE PATENT OFFICE, TOKYO HOU TOU NO KAISEI NI KANSURU TOUSHIN [INVITATION OF COMMENTS ON THE PROPOSAL FOR REVISING PATENT LAW AND OTHER INDUSTRIAL PROPERTY LAWS] 10 (1997).

2. COMMISSION ON INTELLECTUAL PROPERTY RIGHTS IN THE TWENTY-FIRST CENTURY, TOWARD THE ERA OF INTELLECTUAL PROPERTY CREATION: CHALLENGES FOR BREAKTHROUGH (1997) (Japan) [hereinafter 1997 COMMISSION REPORT] (last modified Apr. 7, 1997) <<http://www.jpo-miti.go.jp>>.

Intellectual Property Right proposed to shift this traditional balance between the two competing interests toward more protection of patent owners' interests, and wants patent law to give more incentives for developing pioneer inventions rather than improvements and manufacturing technologies.<sup>3</sup> This new policy is not only in response to criticisms by United States patent owners, but if also reflects the needs of domestic industries facing competition from Asia.<sup>4</sup>

To increase incentives for innovation, the JPO emphasizes the need to give quick and strong patent protection.<sup>5</sup> To meet this need, the JPO reconsidered the time period allowed to request examination and opposition or invalidation proceedings, and revised the patent statute to shorten the time required for examining applications.<sup>6</sup> With respect to the policy of giving strong patent protection, the JPO organized a committee to review claim interpretation and encouraged debates among patent professionals on the appropriateness of the scope of protection given by Japanese courts.<sup>7</sup> Responding to concerns expressed by patent professionals, recent decisions by lower courts have broadly interpreted claims and adopted the doctrine of equivalents.<sup>8</sup> The Japanese Supreme Court recently endorsed these lower court decisions.<sup>9</sup>

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3. 1997 COMMISSION REPORT, *supra* note 2, at 14.

4. INSTITUTE OF INTELLECTUAL PROPERTY, CHITEKI ZAISAN SHINNGAI NI TAISURU SONNGAI BAISHOU BASSOKU NO ARIKATANI KANNSURU CHOUA HOUKOKUSHO [REPORT OF STUDY ON THE APPROPRIATE COMPENSATION FOR DAMAGES AND CRIMINAL SANCTION AGAINST INTELLECTUAL PROPERTY INFRINGEMENT] 81 (1998). A survey indicates that fifty percent of the industry believes that the current damages awarded by Japanese courts are insufficient and the other fifty percent believes the current damages are sufficient. The Second Subcommittee, the First Group, Patent Committee, *Songai Baishou Seido no Genjou [Study of Remedies for Patent Infringement in Japan]* 49 CHIZAI KANRI 879 (1999).

5. *Id.* at 21.

6. Tokkyo Ho [Patent Law], Law No. 41 of 1999.

7. See INSTITUTE OF INTELLECTUAL PROPERTY, REPORT OF STUDIES ON ISSUES CONCERNING CLAIM INTERPRETATION IN JAPAN AND FOREIGN COUNTRIES II (1999). The JPO has contracted with the Institute of Intellectual Property (IIP) to investigate, research, and report on legislation and case law from the United States and European countries.

8. *Genentech Inc. v. Sumitomo Seiyaku K.K.*, 1586 HANREI JIHÇ 117 (Osaka KÇİÇ Saibansho 1996). An English translation and commentary on the case is reported in Toshiko Takenaka, *New Policy in Interpreting Japanese Patents: Osaka High Court Affirming Infringement of Genentech's t-PA patents under the Doctrine of Equivalents*, 3-2 CASRIP NEWSL. 3 (1996) available at <[www.law.washington.edu/~casrip/newsletter/newsv3i2jp.html](http://www.law.washington.edu/~casrip/newsletter/newsv3i2jp.html)>.

9. *Tsubakimoto Seiko v. T.H.K.*, 1630 HANREI JIHÇ 32 (SaikÇ Saibansho 1998). An

After finishing its review of the patent-granting procedure and the liability phase of the patent enforcement procedure, the JPO entered the final stage of its review of the Japanese patent system in light of its new pro-patent policy. This final stage was a review of patentees' remedies for patent infringement and culminated, in late 1998, with a revision of the patent law provisions relating to calculation of damages,<sup>10</sup> and in 1999, with a revision of the patent enforcement proceeding.<sup>11</sup> This legislation is intended to increase damages awarded by Japanese courts, which have been criticized by United States patent owners for their much smaller damage awards than those awarded by United States courts.<sup>12</sup> The JPO's attempt to increase damages was successful because courts reacted very quickly and started to award larger damages more frequently. However, whether such increased damages attain the goal of providing incentive for research and innovation is questionable.

Accordingly, this Article will look at the impact of the new Japanese legislation on patent infringement damages and will discuss whether the increase in damage awards contributes to the creation of breakthrough technology. To understand this impact, Part I will discuss pre-1998 legislation damages and highlight the difference between damages awarded by United States courts and those awarded by Japanese courts, by comparing United States and Japanese case examples. In examining the general tort and patent law theories, Part I will also try to identify the source of the difference and discuss how this difference is reflected in current United States and Japanese case law. Part II of this Article will focus on a recent Japanese case, that indicates a new direction on the calculation of damages and will examine reasons for the change. Finally, Part III of this paper will examine to what extent the new legislation will change the scope of

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English translation of the decision by the author is published in *The Supreme Court Affirmed the Presence of the Doctrine of Equivalents Under Japanese Patent System*, 5-1 CASRIP NEWSL. 12 (1998) available at <<http://www.law.washington.edu/~casrip/newsletter/newsv5i1jp.html>>.

10. Tokkyo Ho [Patent Law], Law No. 51 of 1998, art. 102, para. 1.

11. Tokkyo Ho [Patent Law], Law No. 41 of 1999, art. 105.

12. Scott K. Dinwiddie, Note, *A Shifting Barrier? Difficulties of Obtaining Patent Infringement Damages in Japan*, 70 WASH. L. REV. 833 (1995); William C. Revelos, Note, *Patent Enforcement Difficulties in Japan: Are There Any Satisfactory Solutions for the United States?*, 29 GW J. INT'L L. & ECON. (1995).

patent infringement damages and will discuss whether the increase in patent infringement damages will contribute to the recovery of Japanese economy.

## I. PRE-1998 LAW

### A. *Two Cases Illustrating the Difference in Patent Damages*

A comparison of two cases involving similar facts and claims would best highlight the difference between damages awarded by Japanese and United States courts. However, it is impossible to find similar cases because the case law in each jurisdiction is vastly different and thus parties adopt different strategies and present different claims. Accordingly, this Article selects two cases that represent the respective courts' typical attitude toward awarding damages and emphasizes the difference between them by discussing how the other court would have resolved the same issues.

#### 1. Japanese Example: The *Golf Cart Monorail System Case*

The reluctance of Japanese courts to give damages in the form of lost profits and keep damage awards to the minimum is well represented in *Hankou Kousan K.K. v. Monoreru Kougyou K.K.*<sup>13</sup> In this case, the Osaka District Court denied claims of lost profits and significantly reduced the amount of royalty claimed by the patentee. The utility model in the suit related to a monorail system installed in golf courses for carrying golf carts. Hankou Kousan sued the defendant who manufactured and sold similar monorail systems using two different types of rails along which golf carts move.

The defendant sold two types of monorails systems.<sup>14</sup> The first type used only an above-ground rail that was installed on columns protruding from the ground. The second type combined the above-ground rail with an underground rail that was installed within a U-shaped groove in the ground. The utility model registrant joined with

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13. *Hankou Kousan K.K. v. Monoreru Kougyow K.K.*, 1078 HANREI JIHÇ 117 (Osaka ChihÇ Saibansho 1983).

14. 1078 HANREI JIHÇ at 127.

its subcontractor and completed a commercial product using the registered utility model. Furthermore, the defendant visited the registrant and saw the registered system before marketing its own products.<sup>15</sup> Thus, the defendant obviously knew that its products might infringe the registered monorail system.

The registrant argued that the defendant's two systems were within the language of the registrant's claim, relying on article 26 of the Utility Model Law.<sup>16</sup> In determining the defendant's liability, the Osaka District Court interpreted the claim limitations to require that the rails be on columns. This interpretation resulted in coverage that included the defendant's above-ground rail connected to columns inserted in the ground of the golf course, but excluded the underground rail attached to the side wall of the groove. Accordingly, the court found infringement on the system using only the above-ground system.<sup>17</sup> However, as to the combined system, the court emphasized the improved result of the underground rail and denied both literal infringement and infringement under the doctrine of equivalents. The court ignored the fact that a significant length of the rail in the combined system was installed on columns and thus was within the claim as literally read. The registrant also relied on Utility Model Law article 17 to argue that the defendant's combined system infringed its registration because the system utilized the registered utility model.<sup>18</sup> However, the court again found for the defendant, repeating the reason given to deny literal infringement and infringement under the doctrine of equivalents.<sup>19</sup>

To prevent the registrant from recovering damages in the form of lost profits, the defendant argued that the registrant did not exploit the registered model but only its subcontractor exploited the model.<sup>20</sup> The Osaka District Court did not agree and stated that the registrant

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15. *Id.* at 131.

16. Utility Model Law article 26 applies *mutatus mutandis* to Patent Law article 70 on the technical scope of patents. Jitsuyo Shinan Ho [Utility Model Law], Law No. 123 of 1959, art. 26.

17. 1078 HANREI JIHÇ at 129-30.

18. Utility Model Law article 17, which is similar to Patent Law article 72, provides that the owner of a utility model right shall not commercially work that right. Jitsuyo Shinan Ho [Utility Model Law], Law No. 123 of 1959, art. 17.

19. 1078 HANREI JIHÇ at 130.

20. *Id.* at 125.

exploited the model jointly with its subcontractor.<sup>21</sup> Thus, the court acknowledged that the registrant was entitled to a recovery of lost profits if it could establish the amount resulting from the infringing sales.

However, the court found that the registrant failed to show the amount and denied registrant's claim of damages in the form of lost profits.<sup>22</sup> It stated that the registrant could not produce evidence that sufficiently established its own net profits resulting from the sales of the registered monorail system. The court then examined whether the registrant could establish the amount of the defendant's profits that is presumed to be the registrant's lost profits.<sup>23</sup> The court again found that the registrant failed to establish the net profits made by the defendant through the sales of infringing products, and concluded that the registrant could not rely on the statutory presumption.<sup>24</sup> Thus, the court denied all of the registrant's claims to recover lost profits.

The court then examined the last option to calculate damages, a reasonable royalty.<sup>25</sup> In determining the rate for calculating the royalty, the registrant urged the court to adopt a ten percent royalty rate but could not produce evidence to support the rate because it had never licensed anyone. Rejecting the rate advanced by the registrant, the court acknowledged that there was no established method or custom to calculate a royalty rate in the business related to the registered products.<sup>26</sup> It therefore adopted the method published by the JPO to determine a royalty rate in the licensing of government-owned patents. Calculation under JPO's method resulted in a three percent royalty rate. The court further reduced the rate to 2.4% because the price of the monorail system sold by the defendant included costs unrelated to the utility model registration, such as battery installation and golf cart storage.<sup>27</sup> Finally, the court did not adopt the sales of infringement systems claimed by the registrant but

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21. *Id.* at 132.

22. *Id.*

23. *See* Tokkyo Ho [Patent Law], Law No. 51 of 1998, art. 102, para.2.

24. 1078 HANREI JIHÇ at 133.

25. *See* Tokkyo Ho [Patent Law], Law No. 51 of 1998, art. 102, para.3.

26. 1078 HANREI JIHÇ at 131.

27. *Id.*

only adopted the sales admitted by the defendant.<sup>28</sup> As a result, the court awarded much less than the amount claimed by the registrant as a reasonable royalty.

## 2. United States Example: King Instruments v. Perego

In contrast, United States patentees often get the damages they want unlike Japanese patentees. In *King Instruments Corp. v. Luciano Perego*,<sup>29</sup> the patentee, King, sued the defendant, a manufacturer of automatic magnetic tape splicing and winding machines, for infringement of its three patents. Cassettes available in the market include two types of tapes: magnetic tape and non-magnetic leader tape. However, cassettes are originally produced with the closed leader tape only, and the magnetic tape that records audio or video signals is later inserted by splicing the magnetic tape into the middle of the leader tape and winding it onto the cassette. King and the defendant competed with each other in selling machines that automatically splice and wind the magnetic tapes into the cassettes.

King's two patents-in-suit, the '153 and '123 patents, were directed to a mechanism for cutting the closed leader tape into two sections, aligning the magnetic tape with the leader tape, and applying a splice between the leader and magnetic tapes.<sup>30</sup> The remaining patent-in-suit owned by King, the '461 patent, was directed to a splicing assembly for connecting the magnetic and leader tapes. Although the patentee alleged infringement of all three patents, the district court found that the defendant's machine itself did not infringe either the '153 or '123 patent.<sup>31</sup> The court, however, found infringement of the '461 patent by the splicing assembly in the reel changer adopted by the defendant.

Importantly, King did not use the '461 patent that was found to be infringed by the defendant.<sup>32</sup> Because the defendant's machine is a double-tape reel loader, a reel changer is necessary to switch to the second reel when the first reel is loaded. In contrast, King's machine

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28. *Id.* at 133.

29. *King Instruments Corp. v. Luciano Perego*, 65 F.3d 941 (Fed. Cir. 1995).

30. *Id.* at 944.

31. *King Instruments Corp. v. Luciano Perego*, 737 F. Supp. 1227 (D. Mass. 1990).

32. *King*, 65 F.3d at 947.

was a single-reel loader and thus did not use a reel changer or a splice assembly used in the reel changer. Responding to the defendant's argument that the customers who bought its machines would not have bought patentee's machines, the district court acknowledged that the defendant's machine is structurally and functionally more advanced than the patentee's machine. The court nevertheless upheld causation between the defendant's infringing act and the patentee's lost profits.<sup>33</sup> It only reduced the number of machines claimed by the patentee to exclude those machines which defendant's customers obviously would not have bought.

Although the defendant's splicing and winding mechanism itself did not infringe King's patents and the patentee did not exploit the patented splicing assembly in the reel changer, the district court awarded lost profits for the sales of the entire machine plus its spare parts.<sup>34</sup> The Federal Circuit affirmed the district court's award of damages.<sup>35</sup> As a result, the patentee was compensated for the sales of the machine not covered by any of the patentee's patents, and for the reel changer that was covered by the patent but was never manufactured or sold by the patentee.

### *B. The Source of the Difference in Damage Awards: Policy Judgments*

#### 1. The Theoretical Frameworks Between the United States and Japan are Not the Reason for of Different Damage Awards

The above two cases clearly indicate a huge difference in damages awarded by Japanese and United States courts. The *Golf Cart Monorail System Case* indicates the reluctance of Japanese courts to award lost profits and their effort to keep the award to a minimum. In contrast, *King* indicates United States court's preference to award lost profits. Because lost profits damages are usually larger than reasonable royalty damages, and because such lost profits are calculated on the basis of the entire product with the possibility of

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33. *King*, 737 F. Supp. at 1241-42.

34. *Id.* at 1242.

35. *King*, 65 F.3d at 953.

including spare parts and accessories, United States damages awards are much higher than Japanese awards. This suggests a fundamental difference in calculating damages between the two systems.

However, the theoretical frameworks used by the two jurisdictions to determine the scope of damages are not very different. In determining the scope of damages, both United States and Japanese courts use a “but for” test to establish the cause in fact and then use a “foreseeability” test to further limit the scope to the legal cause or adequate cause (*soutou inga kankei*).<sup>36</sup> The concept of “foreseeability” or “legal/adequate cause” is commonly used to define the boundary between those causes which are closely connected with the result and others which are only remotely connected with the result, and has the effect of limiting responsibility for the consequences of one’s act.<sup>37</sup> The only difference is that United States courts’ analysis includes two distinct steps for each course because a jury decides the cause in fact and a judge decides the legal cause. In contrast, Japanese judges decide both legal and factual causes and the steps to analyze the two types of causes are not distinct.<sup>38</sup> This difference aside, the process used to analyze the scope of damages is similar.

Measurements used by the two jurisdictions are also similar. To overcome the difficulty in calculating infringement damages, both United States and Japanese patent law provide options to calculate damages resulting from infringement.<sup>39</sup> The two options for measuring patent infringement damages, lost profits and reasonable royalty, are common to the Japanese and United States patent statutes. A third option, of defendant’s profits, was also once available under United States patent law but has been eliminated.<sup>40</sup>

If the theoretical frameworks adopted by the two systems in determining the scope of damages and calculating the damages are very similar, where does this huge difference in damage awards come

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36. For a discussion of Japanese tort law, see SHINOZUKA, ET AL., MINPÇ 9: FUHOU KOU [CIVIL LAW 9: TORT] 97 (1993).

37. See, e.g., TORU IKUYO, FUHOU KOU HOU [TORT LAW] 122, 134 (1993).

38. YOSHIO HIRAI, SONGAI BAISHOUHOU NO RIRON [THEORY OF DAMAGE COMPENSATION LAW] 429 (12th ed. 1997).

39. See Tokkyo Ho [Patent Law], Law No. 121 of 1959, art. 102; 35 U.S.C. § 284 (1994).

40. DONALD CHISUM, ON PATENTS, § 20.02[3] (1978, Supp. 1999).

from? To find out the source of the difference, one should focus the analysis on the related policies of tort and patent law, because the legal cause or adequate cause which sets the boundary must be set upon the basis of some social idea of justice or policy.<sup>41</sup> The huge difference in damages in the United States and Japanese jurisdictions is likely the result of different senses of justice and policy in the two societies that cause judges to apply the same framework in a radically different manner.

## 2. The Huge Difference in Tort and Patent Policies is the Source of Different Damage Awards

### a. General Tort Policy

#### i. Japan

The most significant difference between the United States and Japanese legal systems is the role of individuals in enforcing the law. The Japanese legal system more clearly separates the functions of criminal sanctions and civil remedies.<sup>42</sup> Under the Japanese legal system, the government exclusively controls punishment and deterrence of tortious acts.<sup>43</sup> The individual's role in maintaining public order is limited.<sup>44</sup>

This clearly affects the function of damages under the general tort theory. Under Japanese tort law, tort damages function purely to restore the tort victim to the condition he/she would have been in but for the tort.<sup>45</sup> The Japanese civil legal system does not provide for increasing damages depending on the character of the tortious act, such as willful tort. Because deterrence is not a function of tort

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41. W. PAGE KEETON ET AL., PROSSER & KEETON ON THE LAW OF TORTS § 41, at 264 (5th ed. 1984).

42. Hideo Tanaka & Akio Takeuchi, Hou no Jitsugen ni okeru Shijin no Yakuwari [The Role of Private Individuals in Enforcing Law] (pts. 1-4), 88 HOUGAKU KYOUKAI ZASSHI 521 (1971), 89 HAUGAKU KYOUKAI ZASSHI 243, 879, 1033 (1972). An excerpt from this article is published in HIDEO TANAKA, JITTEI HOUGAKU NYUUMON [INTRODUCTION TO SUBSTANTIVE LAW] 51 (23d ed. 1992).

43. TANAKA, *supra* note 42, at 51.

44. *Id.*

45. ICHIRO KATOU, FUHOU KOUI (TORT) 3 (1974).

damages, Japanese courts do not distinguish tort damages from breach of a contract damages.

Further, Japanese courts have adopted the principles originally developed for defining contract damages, and applied them directly to measure loss resulting from a tort.<sup>46</sup> As a result, contract principles control the measurement of loss resulting both from a tort and a breach of contract.

## ii. United States

In contrast, the separation between the functions of tort damages and criminal sanctions under the Common Law Tradition, which the United States legal system follows, is not as clear as that of the Japanese system.<sup>47</sup> The United States legal system combines criminal sanctions and civil remedies to deter people from engaging in tortious acts. Under the United States system, individuals are encouraged to actively participate in enforcing the law by bringing suit.<sup>48</sup> Thus, civil remedies, like damages, are used not only to compensate but also to deter tortious acts.

Under United States law, damages are classified as either compensatory damages or punitive damages.<sup>49</sup> Although the function of compensatory damages is to compensate tort victims, the common law tradition distinguishes contract damages from tort damages<sup>50</sup> and the United States courts traditionally apply different principles to measure tort and contract damages.<sup>51</sup> With respect to the burden of

46. See, e.g., *Osaka Shoten v. Murakami Shoten*, 5 MINSHÅ 386 (Cassation KÇTÇ Saibansho, 1926).

47. TANAKA & TAKEUCHI, *supra* note 41.

48. *Id.*

49. For a general discussion of tort damages, see DAN DOBBS, *LAW OF REMEDIES: DAMAGES EQUITY RESTITUTION* (2d ed. 1993) and KENNETH YORK, ET AL., *REMEDIES: CASES AND MATERIALS* (5th ed. 1992).

50. R. W. Byrom, *Do Damages Depend on the Same Principles Throughout the Law of Tort and Contract?*, 6 U. QUEENSLAND L.J. 118 (1968).

51. *Felder v. Reeth*, 34 F.2d 744 (9th Cir. 1929). However, United States legal commentators suggest that tort law encompasses contract law through the courts' application of tort law principles to measure both tort and contract damages. See GRANT GILMORE, *THE DEATH OF CONTRACT* 87 (1974); Jeffrey O'Connell, *The Interlocking Death and Rebirth of Contract and Tort*, 75 MICH. L. REV. 659 (1977). This development in United States tort and contract law contrasts greatly with Japanese courts' practice of applying contract principles to both tort and contract damages.

proof, to prevent a wrongdoer from benefiting from the difficulty of proving causation between the tortious act and damages, United States courts require less certainty in the proof of damages for a tort than in the proof of damages for a breach of contract.<sup>52</sup>

Further, reflecting the policy of encouraging individuals to enforce the law, United States tort law provides punitive damages that may be awarded beyond the amount assessed to compensate actual damages. Punitive damages function to punish and deter torts and also to financially assist tort victims by covering attorney fees and other costs of bringing suit.<sup>53</sup> This aspect contrasts sharply with breach of contract damages, where breaches are not distinguished by “willfulness” and no punitive damages are awarded.<sup>54</sup>

## b. Patent Law Policy

### i. Japan

Another source of the difference in damages between Japan and the United States comes from patent policy. Prior to a 1998 revision of Japanese Patent, patent law provisions for measuring patent infringement damages also reflected the policies of Japanese general tort law. Article 102 of the pre-1998 law provided two options for calculating patent infringement damages: (1) defendant’s profits,<sup>55</sup> and (2) a reasonable royalty.<sup>56</sup> Patentees could also claim damages in the form of lost profits under the general tort provision of the Civil Code,<sup>57</sup> but the patent statute did not expressly provide that option.<sup>58</sup> The 1998 revised article 102, paragraph one, now expressly allows claims for lost profit damages.<sup>59</sup>

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52. RESTATEMENT (SECOND) OF CONTRACTS § 351 cmt. a (1979).

53. DAN DOBBS, 1 LAW OF REMEDIES: DAMAGES EQUITY RESTITUTION 475-84 (2d ed. 1993).

54. RESTATEMENT (SECOND) OF CONTRACTS, introductory note (1979).

55. Tokkyo Ho [Patent Law], Law No. 51 of 1998, art. 102, para.1.

56. *Id.* art. 102, para.2.

57. MINPÇ [Civil Code], art. 709.

58. Tokkyo Ho [Patent Law], Law No. 51 of 1998, art. 102. For relation between pre-1998 Patent Law, article 102, and Civil Code 709, see Nakayama, Chukai Tokkyo Ho Gaisetsu, PATENT LAW ANNOTATED 861 (2d ed. 1989).

59. *Id.* art. 102, para.1. For the translation of the new provision by the author, see *infra* note 211.

The language of the pre-1998 article 102 indicates that the legislature was more concerned about protecting innocent infringers than about protecting patentees. This emphasis was expressed by paragraph three of that provision, which gave Japanese courts the discretion to limit damages to an amount equal to a reasonable royalty, even if actual damages were higher, unless the infringer willfully or with gross negligence engaged in infringement. This provision remains as paragraph four in the 1998 revision of article 102, but may decrease in importance if courts choose to prioritize the new paragraph one, which allows claims for lost profit damages.<sup>60</sup> In any case, Japanese patent law has not guaranteed a full compensation of damages because courts are allowed to reduce the amount assessed to compensate the patentee's loss.<sup>61</sup> This provision, at least under the pre-1998 article 102, suggests that reasonable royalty has been the primary basis for calculating patent-infringement damages and that damages, in the form of an infringer's profits or lost profits, have been exceptional and additional.

The legislative history of the pre-1998 article 102 also support this interpretation. The legislative history indicates that legislators considered it unfair to have infringers, whose products were not clearly covered by patented claims, compensated the same amount as infringers who willfully or with gross negligence infringed the patented claim.<sup>62</sup> Under the Japanese tort system, courts cannot award damages beyond an amount that is compensatory.<sup>63</sup> As a result, the damage provisions enabled courts only to reduce the amount of damages below actual damages against innocent infringers, and left courts unable to increase the amount against willful infringers. This resulted in a constant loss of money for Japanese patentees who brought suits because courts seldom award attorney fees, and attorney fees for patent infringement litigation are relatively more expensive than other type of cases.<sup>64</sup>

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60. *Id.* art. 102, para.1.

61. *Id.*

62. YOSHIYUKI TAMURA, CHITEKI ZAISANKEN TO SONGAI BAISHOU [INTELLECTUAL PROPERTY AND COMPENSATION OF DAMAGES] 56 (1993).

63. HIDEO TANAOKA, THE JAPANESE LEGAL SYSTEM, 345 (1984).

64. Although Japanese courts award official fees, parties seldom enforce that part of the judgment because it is too much trouble for them to ask court clerks to calculate the amount and

## ii. United States

In contrast, the goal of United States patent infringement damages is adequate and full compensation for damages resulting from infringement.<sup>65</sup> The patent statute, for many years, has expressly stated this goal.<sup>66</sup> The current statute provides two options for calculating infringement damages: (1) lost profits and (2) reasonable royalty.<sup>67</sup> The United States patent statute once provided an option of infringer's profits, the first option provided by the pre-1998 Japanese Patent Law.<sup>68</sup> Congress eliminated this option in 1946 because the option was considered to be redundant with lost profits and difficult to establish by patentees.<sup>69</sup>

The language of § 284 indicates that United States legislators are more concerned about insufficient compensation for patentees than about harsh results for innocent infringers. No provision exists to enable courts to reduce damages resulting from innocent infringement. Instead, the section expressly prevents courts from awarding damages less than a reasonable royalty.<sup>70</sup> Accordingly, the language of the section is interpreted by courts as being expansive rather than limiting.<sup>71</sup>

The language of § 284 indicates concern only for patentees who are victims of infringement, and indicates no concern for innocent infringers. Thus, no provision allows courts to reduce the amount assessed to compensate for damages even if damages are awarded in the form of lost profits beyond a reasonable royalty. The section only allows courts to increase compensatory damages up to three times for

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enforce the judgment For the discussion of attorney fees, see INDUSTRIAL PROPERTY RIGHT COMMITTEE, JAPANESE PATENT OFFICE, TOKKYO HOU TOU NO KAISEI NI KANSURU TOUSHIN [INVITATION OF COMMENTS ON THE PROPOSAL FOR REVISING PATENT LAW AND OTHER INDUSTRIAL PROPERTY LAWS] 95 (1997).

65. *General Motors Corp. v. Devex Corp.*, 461 U.S. 648, 654-55 (1983).

66. 35 U.S.C. § 284 ¶ 1 (1994).

67. *Id.*

68. DONALD CHISUM, *supra* note 40, § 20.02.

69. Act of August 1, 1946, ch. 726, § 1, 60 Stat. 778 (1946). For a discussion of legislative history of 35 U.S.C. § 284, see Vincent Tassinari, *Patent Compensation under 35 U.S.C.*, 5 J. INTELL. PROP. L. 59 (1997).

70. 35 U.S.C. § 284 ¶ 1.

71. *See, e.g., Rite-Hite Corp. v. Kelley Co. Inc.*, 56 F.3d 1538, 1544 (1995).

victims of willful infringement.<sup>72</sup> Further, under § 285, in exceptional cases courts may also grant attorney fees, which sometimes results in an amount more than the damage award.<sup>73</sup> As a result, unlike Japanese patentees, United States patentees often make money for suing infringers.

### *C. Case Law: Difference Reflecting Policy*

#### 1. Lost Profits

##### a. The Requirement of Patent Invention Exploitation

In interpreting the language of the pre-1998 section 102 to reflect the underlying policies, Japanese courts have awarded damages in the form of reasonable royalty in more than fifty percent of all cases, and have awarded damages in the form of lost profits in less than ten percent of all cases.<sup>74</sup> The first reason why there is a small chance of obtaining an award of lost profits is that courts do not even bother to examine the claim of damages in the form of lost profits if patentees do not exploit their inventions by themselves.<sup>75</sup> Therefore, in the *Golf Cart Monorail System Case*, the Tokyo District Court examined the registrant's claim of lost profits only after making a finding as to the registrant's own sales.<sup>76</sup> Since a significant proportion of patents has never been exploited,<sup>77</sup> the patentees of these patents will be automatically disqualified for claims of lost profits in Japanese courts.

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72. 35 U.S.C. § 284 ¶ 2.

73. 35 U.S.C. § 284.

74. INSTITUTE OF INTELLECTUAL PROPERTY, CHITEKI ZAISANKEN SHINGAI NI KAKARU MINJITEKI KYUSAI NO TEKISEIKA NI KANSURU CHOUSHA KENKYUU [STUDY OF APPROPRIATE CIVIL REMEDIES FOR COMPENSATING INTELLECTUAL PROPERTY DAMAGES] 33 (1996) [hereinafter, IIP DAMAGES REPORT]. For a report in English on Japanese patent infringement damages, see Toru Toyama, *Study with Respect to Proper Civil Remedies for Infringements of Intellectual Property*, 1996 IIP BULL. 62 (1996).

75. See Kazuo MASUI & YOSHIYUKI TAMURA, TOKKYO HANREI GAIDO [GUIDEBOOK OF PATENT COURT DECISIONS] 277 (2d ed. 1997).

76. 1078 HANREI JIHŌ at 125.

77. See TOWARD THE ERA OF INTELLECTUAL PROPERTY CREATION, *supra* note 2, at 25 (discussing Japanese patents). See also Joseph Rossman & Sanders, *The Patent Utilization Study*, in NURTURING NEW IDEAS: LEGAL RIGHTS AND ECONOMIC ROLES 106 (L. James Harris ed., 1969) (discussing United States patents).

United States courts also interpret § 284 to reflect the underlying policies. First, United States courts, particularly the United States Court of Appeals for the Federal Circuit, indicate a preference to award actual damages in the form of lost profits to accommodate the goal of full compensation expressed in the language of § 284.<sup>78</sup> Thus, courts regard actual damages, such as lost profits, as the primary option for compensation and award a reasonable royalty only if the patentee is unable to prove actual damages.<sup>79</sup>

Courts also interpret the legislative intent as giving only the bottom line but no ceiling.<sup>80</sup> In other words, courts are not limited in expanding the scope of damages to fully compensate a patentee's loss in the form of lost profits, but courts are only limited when they can award damages in the form of reasonable royalty. United States courts make every effort to award damages in the form of lost profits and are reluctant to accept a defendant's argument denying causation, which would lead to an award of reasonable royalty.

Accordingly, it is not difficult to persuade United States courts to grant an award of lost profits. Unlike Japanese courts' practice, United States courts do not automatically reject claims of damages in the form of lost profits when a patentee does not exploit his invention.<sup>81</sup> In *King*, the Federal Circuit emphasized the danger of insufficient compensation and a retroactive compulsory license that may result from the practice of requiring patentee's exploitation of the patented invention.<sup>82</sup> The court then viewed that such practice would encourage infringement.<sup>83</sup> Furthermore, in an earlier en banc decision, *Rite-Hite*, the Federal Circuit acknowledged that normally there can be no lost profits when the patentee does not exploit his invention at all, although it emphasized that "whether a patentee sells

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78. For a general discussion of Federal Circuit case law on patent infringement damages, see Paul Janicke, *Contemporary Issues in Patent Damages (A Review of Recent Decisions of the United States Court of Appeals for the Federal Circuit)*, 42 AM. U. L. REV. 691 (1993); Laura Pincus, *The Computation of Damages in Patent Infringement Actions*, 5 HARV. J.L. & TECH. 95 (1991).

79. *SmithKline Diagnostics, Inc. v. Helena Laboratories Corp.*, 926 F.2d 1161, 1164 (Fed. Cir. 1991).

80. *See Rite-Hite*, 56 F.3d at 1544.

81. *See id.* at 1546.

82. *King*, 65 F.3d at 951.

83. *Id.*

its patented invention is not crucial in determining lost profits damages.”<sup>84</sup>

According to the court, denying the patentees their recovery of lost profits where they chose to market a competing, but non-patented product, as was the situation in *King*, would undermine the constitutional goal to give incentives for innovation.<sup>85</sup> Another example raised by the court was where a patentee obtained multiple patents on three alternative substitutes because the three substitutes could not be comprehended in a single claim.<sup>86</sup> If a patentee exploited only one substitute but the patent covering another substitute was infringed, limiting the patentee’s recovery to a reasonable royalty would result in a compulsory license to the willful infringer.<sup>87</sup>

Finally, in *King*, the Federal Circuit referred to a practice adopted by Japanese courts of checking whether the patentee’s product embodies the infringing claim as “reverse infringement,” and noted that the practice makes the litigation proceeding more cumbersome and complex.<sup>88</sup> The court concluded that such a practice, to show the patentee’s exploitation, is not required under § 284.<sup>89</sup> As a result, United States patentees are given a fair chance to prove lost profits even if they have not made or sold any products embodying the infringing patent.

#### b. Burden of Proof and Other Procedural Aspects

The second reason explaining the difficulty in establishing a claim of lost profits in Japanese courts is the high burden of proof. Even if a patentee exploits her invention and passes the first test, she must establish causation between the infringer’s infringement and damages. Under the Japanese Code of Civil Procedure, a plaintiff wishing to establish damages has the burden of producing evidence, which removes all possible doubts as to the presence or absence of

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84. *Rite-Hite*, 56 F.3d at 1548.

85. *King*, 65 F.3d at 950.

86. *Id.* at 952.

87. *Id.*

88. *Id.* at 952.

89. *Id.*

the fact.<sup>90</sup> This standard is considered by Japanese civil procedure scholars to be much higher than the preponderance rule but a little bit lower than a clear and convincing rule.<sup>91</sup> Even after a finding of liability on infringers, Japanese courts treat parties equally and impose this high burden of proof on patentees. Thus, Japanese patentees often fail to establish causation between lost profits and the act of infringement.

Japanese patentees were further hindered from recovering lost profits by the lack of an effective measure under the old civil procedure law to collect evidence on damages.<sup>92</sup> Although article 105 of the pre-1999 revision enabled patentees to request infringers to produce documents necessary for calculation of damages,<sup>93</sup> courts often allowed infringers to refuse to produce the requested document when the document included proprietary information.<sup>94</sup> Japanese courts accepted this excuse because Japanese civil procedure law provided no proceeding to protect proprietary information at trial. Documents necessary for calculating lost profits often include proprietary information, such as net profits and costs of materials. Therefore, infringers often avoided the duty imposed by the pre-1999 version of article 105 by requesting protection of proprietary information. The Golf Cart Monorail Case is a typical example of a patentee not being able to introduce sufficient evidence to support the number of infringing sales it claimed. As a result, the court recognized only the number of sales to which the infringer

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90. NAKANO MIKAZUKI ET AL., *MINJI SOSHOHO ENSHU* [CIVIL PROCEDURE SEMINAR] 288 (1983).

91. In Japanese courts, parties must convince judges about the absence or presence of fact to an eighty percent certainty. See RYUJI FUNAKOSHI, *JITTEIHOU CHITSUJO TO SHOUMEI SEKININ* [ORDER OF LAW AND BURDEN OF PROOF] 12 (1996); HIROMI MURAKAMI, *MINJI SAIBAN NI OKERU SHOUMEI SEKININ* [BURDEN OF PROOF IN CIVIL PROCEDURE] 6 (1980).

92. For a general discussion of the revised Civil Procedure Law, see Ryu Takabayashi, *Practices of Patent Litigation in Japanese Courts*, 5-2 CASRIP NEWSL. 13 (1998) available at <<http://www.law.washington.edu/~casrip/newsletter/newsv5i2jp2.html>>.

93. *Tokyo Ho* [Patent Law], Law No. 51 of 1988, art. 105.

94. See *MINSOHÇ* [Code of Civil Procedure], art. 220, no. 4. See also JAPANESE PATENT OFFICE, *KOUGYOU SHOYUUKEN SHINGIKAI KIKAKU SHO-IINKAI HOUKOKUSHO: PURO PATENTO SEISAKU NO ISSOU NO SHINKA NI MUKETE* [REPORT BY PLANNING SUBCOMMITTEE OF INDUSTRIAL PROPERTY COMMITTEE: IN FURTHERANCE OF PRO-PATENT POLICIES] 35 (1998).

admitted.<sup>95</sup>

Further, the lack of a proceeding to protect proprietary information forces patentees to choose between disclosing information and giving up a claim of lost profits. For example, in the *Golf Cart Monorail System Case*, the registrant was very unlikely to produce sufficient evidence because the evidence included proprietary information relating to a registrant's net profits. Consequently, the court rejected the registrant's claim of lost profits.

In contrast, United States courts do not impose such a high burden of proof on patentees. Reflecting the general tort policy of requiring less certainty to prove tort damages, United States courts only require patentees to show causation with a reasonable probability.<sup>96</sup> Unlike Japanese courts, United States courts clearly show their preference for patentees once an infringer's liability is decided. The Federal Circuit has repeatedly emphasized that patentees need not negate every possibility that customers of infringing products might not have bought another product or might not have bought any comparable product at all.<sup>97</sup> The court also noted that any doubts regarding the calculation of damages must be resolved against the infringer.<sup>98</sup>

Additionally, the discovery process under the United States Federal Rules of Civil Procedure enables patentees to collect the documents necessary to calculate lost profits.<sup>99</sup> Due to extensive sanctions, United States patentees can readily obtain information necessary for calculating lost profits. United States civil procedure provides a proceeding for protecting proprietary information at trial.<sup>100</sup> Thus, United States patentees seldom fail to establish their own net profits.

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95. IIP DAMAGES REPORT, *supra* note 74, at 37.

96. *Paper Converting Machine Co. v. Magna-Graphics Corp.*, 745 F.2d 11, 21 (Fed. Cir. 1984).

97. *King Instruments Corp. v. Otari Corp.*, 767 F.2d 853 (Fed. Cir. 1985), *appeal after remand*, 814 F.2d 1560 (Fed. Cir. 1987).

98. *Kaufman Co. v. Lautech, Inc.*, 926 F.2d 1136, 1141 (Fed. Cir. 1991).

99. For a general discussion of discovery procedure, see ROGER HAYDOCK & DAVID HERR, *DISCOVERY PRACTICE* (2d ed. 1988); KIMBARY PACE MOORE ET AL., *PATENT LITIGATION AND STRATEGY* 97 (1999).

100. HAYDOCK & HERR, *supra* note 99, § 1.9.

### c. Positive and Negative Tests for Causation

The third difficulty of claiming lost profits in Japanese courts is the lack of case law on positive tests or factors to show causation between an act of infringement and lost profits. Japanese patentees often argue that their lost profits are the amount of net profits of their own products multiplied by the number of infringing products sold by infringers. Japanese courts find that showing such an amount alone is insufficient to show causation, and do not grant any part of lost profits recovery, stating that the patentee did not show causation.<sup>101</sup> However, they never give any clue as to what showing is necessary to establish causation. Consequently, Japanese courts find causation only in exceptional cases where only two competitors exist in a unique market<sup>102</sup> or where the infringing product is exactly the same as patentee's product.<sup>103</sup>

In contrast, Japanese courts developed significant case law on factors to negate causation.<sup>104</sup> Courts have rejected a lost profits claim for lack of causation when: (1) the patented part did not attract customers to purchase the whole product;<sup>105</sup> (2) the infringing product was not exactly the same as the patentee's product;<sup>106</sup> (3) infringing products were less expensive than the patentee's product;<sup>107</sup> or (4) a substitute of the patented product was available in the market.<sup>108</sup>

In contrast, United States courts seldom accept the arguments of an infringer to negate causation. For example, in *King*, the infringing

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101. *Asahi Ishimoto Kogyo v. Kamishima Kagaku Kokyo*, 156 HANREI TASMUZU 218 (Tokyo ChihÇ Saibansho 1964).

102. *See, e.g., Ando Card Kogyo v. Nihon Jimuki*, 154 HANREI TAIMUZU 138 (Tokyo ChihÇ Saibansho 1964).

103. *See, e.g., Shintoron Co. v. Nitto Denki Seisakusho*, 152 HANREI TAIMUZU 163 (Tokyo ChihÇ Saibansho 1964). For a review of cases granting a recovery of lost profits, see IIP DAMAGE REPORT, *supra* note 74, at 33-35.

104. *See MASUI & TAMURA, supra* note 75, at 278.

105. *See, e.g., Sadaharu Tada v. Ooki Seisakusho*, 136 HANREI TAIMUZU 116 (Tokyo ChihÇ Saibansho 1962).

106. *See, e.g., Takeya Kagaku v. Shuupura Kogyo*, 1988 TOKKYO KANRI HANKETSU SHU, 268 (Osaka ChihÇ Saibarsho 1987).

107. *See, e.g., Tsugami Seisakusho v. Taiyo Seiki Seisakusho*, 185 HANREI TAIMUZU 209 (Tokyo ChihÇ Saibansho 1966).

108. *Id.*

machine that used a double-reel loader was structurally and functionally different, and more advanced, than the patentee's machine that used a single-reel loader. A United States district court only discounted the patentee's lost sales based on the structural difference, finding that such difference was not sufficient to negate the causation.<sup>109</sup> The Federal Circuit affirmed this conclusion.<sup>110</sup> In contrast, in the *Golf Cart Monorail Case*, the defendant introduced a similar argument. Although the court did not express its view on the argument, the functional difference appeared to be one of the reasons that persuaded the court to deny causation and reject the patentee's claim of lost profits. Accordingly, had *King* been decided by a Japanese court, the court would have been very likely to deny "but for" causation, resulting in no recovery of lost profits, even if *King* was exploiting the infringed splicing assembly.

The lack of a positive test for causation and the presence of too many negative tests significantly discourages Japanese patentees from claiming lost profits. Therefore, if Japanese patentees exploit their patented inventions, they prefer to claim a recovery of defendant's profits.<sup>111</sup> The patent statute provides a presumption that an infringer's profits are equal to the patentee's lost profits.<sup>112</sup> This practice saves Japanese courts the time of examining complicated factual issues in finding causation. At the same time, this practice imposes the burden on Japanese patentees to prove net profits of the infringer instead of their own profits, as is done if lost profits are claimed. Because of the difficulty of obtaining evidence to show the opposing party's net profits, patentees often fail to establish such profits.<sup>113</sup>

Moreover, patentees are not allowed to recover an infringer's profits when the patent covers only part of the entire product, and are required to show the contribution rate, *kiyo-ritsu*, of the patented part

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109. *King Instruments Corp. v. Perego*, 737 F. Supp. 1227, 1242 (D. Mass. 1990).

110. *King*, 65 F.3d at 953.

111. IIP DAMAGES REPORT, *supra* note 74, at 29. Patentees included lost profits as their primary claims of damages in only 15.8% of all cases. *Id.*

112. Tokkyo Ho [Patent Law], Law No. 51 of 1998, art. 102, para. 1.

113. *See, e.g., Fuji Denko v. Sanko, Hanrei Kogyo Shoyuken-Ho 2535-279* (Osaka Koto Saibansho 1986).

versus the non-patented part.<sup>114</sup> Patentees must show apportionment between the patented part and the non-patented part and are entitled only to a recovery of the defendant's profits derived from the patented part of the product.<sup>115</sup> If a patentee is unable to establish the contribution rate, the court may deny the entire claim of defendant's lost profits.<sup>116</sup> Further, Japanese courts do not allow a recovery for spare parts or accessories of the patented products.<sup>117</sup>

Even if patentees are entitled to defendant's profits for the entire product, such profits are often less than the patentee's own lost profits because infringers are often the second comer in the market and do not enjoy the benefit of a monopoly price.<sup>118</sup> Because of these difficulties, full recovery of defendant's profits was awarded in only 16.4% of those cases that sought recovery of defendant's profits.<sup>119</sup> On average, Japanese courts have granted only 53% of the amount claimed by patentees as infringer's profits.<sup>120</sup>

In contrast, the Federal Circuit developed case law with more positive tests for causation than negative tests. First, where only the patentee and infringer are competitors in the market, which is an exceptional circumstance and even Japanese courts would find causation, courts find causation without further evidence.<sup>121</sup> Other circumstances where courts find sufficient causation include: when the patent owner lost the sales to the infringer under a bidding system;<sup>122</sup> when the entry and departure of the infringer's product in

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114. MASUI & TAMURA, *supra* note 75, at 294.

115. *Id.*

116. *See, e.g.*, Rickka Mishin v. Maruzen Mishin, 223 HANREI TAIMUZU 200 (Tokyo ChihÇ Saibansho 1968).

117. *See, e.g.*, Yokoyama Kogyo v. Hayakawa Tekko, 229 HANREI TAIMUZU 231 (Tokyo ChihÇ Saibansho 1969)

118. A good example is Panduit Corp. v. Stahl Bros. Fibre Works, Inc., 575 F.2d 1152 (6th Cir. 1978). The infringer cut the patentee's price 30% to compete with the patentee's product.

119. IIP DAMAGES REPORT, *supra* note 74, at 36.

120. *Id.*

121. *See* Yale Lock Co. v. Sargent, 117 U.S. 536 (1886); Marsh-McBirney, Inc. v. Montedoro-Whitney Corp., 882 F.2d 498, 505 (Fed. Cir. 1989); Lam, Inc. v. Johns-Manville Corp., 718 F.2d 1056, 1065 (Fed. Cir. 1983).

122. *See* Wallace & Tiernan Co. v. Syracuse, 45 F.2d 693 (2d Cir. 1930); Manville Sales Corp. v. Paramount Systems, Inc., 14 U.S.P.Q.2d (BNA) 1219 (E.D. Pa. 1989), *further opinion*, 14 U.S.P.Q.2d (BNA) 1299 (E.D. Pa. 1989), *aff'd*, 917 F.2d 544 (Fed. Cir. 1990).

the market forces a change in price of the patentee's products;<sup>123</sup> and, when the infringer was either a former customer or supplier to the customer.<sup>124</sup>

Even in cases where such exceptional circumstances do not exist, United States courts have developed a positive test to infer causation. This test includes four factors to infer causation and is referred to as the "*Panduit*" test, named for the case that adopted the test.<sup>125</sup> These four factors are: (1) a presence of demand for patented products in the market; (2) an absence of acceptable, non-infringing alternatives; (3) patentee's own capacity to have met that demand; and (4) the amount of profits the patentee would have made.<sup>126</sup> A patentee can demonstrate the demand for the patented products by showing that the infringers sold infringing products.<sup>127</sup> Showing the capability to manufacture is not difficult because courts require only potential capability, which can be demonstrated by the possibility of subcontracting the increased portion of manufacture and of hiring new sales persons to sell that portion.<sup>128</sup> This is in stark contrast with the practice of Japanese courts, which require patentees to show the capability to manufacture and sell additional products with a high degree of certainty.<sup>129</sup>

Of the first three factors, showing the second factor, the absence of alternatives, is the most difficult. However, even this showing is easy because the Federal Circuit has developed a strict test for showing acceptable alternatives in order to shift the burden of proof from the patentee to the infringer. This test requires a finding that the alleged alternative has all of the features and functions of the patented products, which often leads to an absence of acceptable alternatives, the alternatives being less effective and inadequate.<sup>130</sup>

123. See *Pressed Prism Glass Co. v. Continuous Glass Prism Co.*, 181 F. 151 (C.C.W.D. Pa. 1910); *Hall v. Stern*, 20 F. 788 (C.C.D.N.Y. 1884).

124. See *Central Soya Co. v. George A. Hormel & Co.*, 723 F.2d 1573 (1983).

125. *Panduit Corp. v. Stahlin Bros. Fibreworks, Inc.*, 575 F.2d 1152 (6th Cir. 1977).

126. For a general discussion of these factors, see CHISUM, *supra* note 40, § 20.03[1][b][v].

127. *Gyromat Corp. v. Champion Spark Plug Co.*, 735 F.2d 549 (Fed. Cir. 1984).

128. *Id.*

129. 270 TOKKYO TO KIGYOU 54 (Osaka ChihÇ Saibansho 1991).

130. *Radio Steel & Mfg. Co. v. MTD Products, Inc.*, 788 F.2d 1554 (Fed. Cir. 1986). The Federal Circuit may apply a less stringent test, see *SmithKline Diagnostics, Inc. v. Helena Laboratories Corp.*, 926 F.2d 1161 (Fed. Cir. 1991), *aff'g* 12 U.S.P.Q.2d (BNA) 1375 (E.D.

Because a non-infringing product by definition lacks at least some features or functions of the patented product, a patentee can easily point out the difference between the non-infringing alternative alleged by the infringer and the patented products and argue that the alternative is inadequate to constitute an acceptable alternative.<sup>131</sup> Even if an infringer successfully shows an acceptable alternative, so the patentee fails on the second factor, courts may exercise their own discretion and award lost profits based on market share.<sup>132</sup>

In contrast, there are only a few negative tests to reject causation under the case law of the Federal Circuit. Negative tests may function to reduce the number of lost sales that the patentee can show but do not prevent a recovery of lost profits completely. As *King* teaches, the presence of a substitute or competitor in the market does not negate causation, but only reduces the number of products the patentee would have sold based on the market share. Even a major difference in structure and function between the patentee's product and the defendant's product does not negate causation but only reduces the number the patentee would have sold. Evidence that the product of the infringer is less expensive than the patentee's product is not sufficient to negate causation.<sup>133</sup>

Once the first three factors are demonstrated, patentees show the fourth factor, profits, by simply estimating the expected profits that the patentee would have made from the infringing sales.<sup>134</sup> This amount is calculated by multiplying the patentee's net profits per unit of product by the number of units sold by infringers.<sup>135</sup> Unlike

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Tex. 1989). For a general discussion of the definition of non-infringing alternatives, see CHISUM, *supra* note 40, § 20.03[1][b][v] [E].

131. Judge Nies criticized the definition requiring a strict identity and clarified that acceptable alternatives do not represent an embodiment of the patented invention. *SmithKline Diagnostics, Inc.*, 926 F.2d at 1166.

132. *State Indus., Inc. v. Mor-Flo Indus., Inc.*, 883 F.2d 1573, 1580 (Fed. Cir. 1989), *cert. denied*, 493 U.S. 1022 (1990). For a general discussion of the market share approach, see Joel Meyer, Note, *State Industries, Inc. v. Mor-Flo and the Market Share Approach to Patent Damages: What is Happening to the Panduit Test?*, 1991 WISC. L. REV. 1369 (1991).

133. *Dobson v. Dornan*, 118 U.S. 10 (1886); *SmithKline Diagnostics, Inc. v. Helena Laboratories Corp.*, 926 F.2d 116 (Fed. Cir. 1991), *aff'g* 12 U.S.P.Q.2d (BNA) 1375 (E.D. Tex. 1989). However, if demand for the patented product is elastic, courts may negate causation. See *BIC Leisure Prods. v. Windsurfing Int'l Inc.*, 1 F.3d 1214 (Fed. Cir. 1993).

134. *Ryco, Inc. v. Ag-Bag Corp.*, 857 F.2d 1418, 1427-28 (1988).

135. *Pincus*, *supra* note 78, at 113.

Japanese practice which requires patentees to show the defendant's profits, United States practice is patentee-friendly because a patentee can readily show its own profits.

Finally, the entire-market-value rule relieves patentees from the significant burden of establishing apportionment between patented and non-patented parts when a patent covers only a part of the product.<sup>136</sup> The difficulty related to apportionment was well understood by the United States patent community from experiences dealing with the eliminated measurement of defendant's profits.<sup>137</sup> Before United States courts widely adopted the entire-market-value rule, United States courts had responded to apportionment problems as Japanese courts did, by rejecting any recovery of lost profits because of the patentee's failure to provide a basis of apportionment.<sup>138</sup> Patentees now establish that the value of the entire product depends on the patented part, instead of showing the perplexing apportionment and can recover lost profits for the entire product.<sup>139</sup>

Not surprisingly, it is easy for patentees to persuade the Federal Circuit to apply the entire-market-value rule. In early cases, courts set a high hurdle for taking advantage of the rule by requiring an additional showing that the whole machine's entire value is "properly and legally" attributable to the patented feature.<sup>140</sup> The Court of Claims, one of two predecessor courts to the Federal Circuit, also required the additional showing of a paramount importance of the patented features in substantially creating the value of the non-patented features.<sup>141</sup> Although the Federal Circuit in early cases followed these precedents,<sup>142</sup> courts in more recent cases no longer require the additional showing. For example, in *King*, the court

136. See CHISUM, *supra* note 40, § 20.03[1].

137. *Id.* § 20.02[3].

138. See, e.g., *Westinghouse v. New York Air Brake Co.*, 140 F. 545, 550-51 (2d Cir. 1905); *Roemer v. Simon*, 31 F. 41, 42 (S.D.N.Y. 1887).

139. The leading case for the entire-market-value rule is *Goulds Mfg. Co. v. Cowing*, 105 U.S. 253 (1881).

140. See, e.g., *Westinghouse Elec. & Mfg. Co. v. Wagner Elec. & Mfg. Co.*, 225 U.S. 604, 615 (1912).

141. *Marconi Wireless Tel. Co. v. United States*, 99 Ct. Cl. 1 (Ct. Cl. 1942), *aff'd in part and vacated in part*, 320 U.S. 1 (1943).

142. *State Industries*, 883 F.2d at 1480.

granted lost profits for the entire machine even as to non-patented spare parts when the “but for” test was met, noting that “the entire market recognizes that the economic value of a patent may be greater than the value of the sales of the patented part alone.”<sup>143</sup> As properly noted by Judge Nies in her dissenting opinion,<sup>144</sup> this change in the Federal Circuit’s attitude toward the entire-market-value rule has led to the strange result that a recent Federal Circuit panel affirmed the district court’s award of damages to recover for spare parts of a non-patented machine, even though an old panel of the same court did not allow a recovery of damages for spare parts of a patented machine in another case.<sup>145</sup>

As clearly demonstrated by *King*, recent Federal Circuit cases suggest that the condition is met by showing the presence of a patented part because to extend the recovery to the entire product, the court does not require patentees to meet the requirement for applying the entire-market value rule.<sup>146</sup> This practice shifts the burden to the infringer to prevent the court from applying the entire-market-value rule. Further, the Federal Circuit may apply the entire-market-value test to enable patentees to recover damages for lost sales of accessories and separate products that are sold with patented products.<sup>147</sup> This frequent application of the entire-market-value rule not only removes the burden of proof to show apportionment from patentees, it also expands the recovery of damages significantly.

## 2. Reasonable Royalty

### a. The Function of Prior Royalty and Industry Standard

Japanese courts have granted damages in the form of a reasonable royalty in more than half of all cases.<sup>148</sup> The royalty is defined as the amount that a patentee ordinarily receives as compensation for

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143. *King*, 65 F.3d at 950 n.4.

144. *Id.* at 956-57.

145. *King Instrument Corp. v. Otari*, 767 F.2d 853 (Fed. Cir. 1985), *cert. denied*, 475 U.S. 1016 (1986).

146. *King*, 65 F.3d at 957.

147. *Rite-Hite*, 56 F.3d at 1544.

148. IIP DAMAGES REPORT, *supra* note 74, at 39.

allowing exploitation of the patented invention. The reasonable royalty functions as a minimum compensation for infringement; although, the statute does not expressly provide for this.<sup>149</sup> However, it is difficult for patentees to persuade courts to grant the full amount of reasonable royalty requested by the patentee. This difficulty is clearly indicated by the low proportion of cases (31.1%) where the requested amount was fully awarded.<sup>150</sup> The amount of royalty actually awarded on average is much less (63%) than the amount requested by patentees.<sup>151</sup>

One reason for the low royalty award is the difficulty of establishing the number of infringing products sold by the defendant. The same problem of collecting evidence, explained earlier with respect to lost profits, also applies to the proof of the defendant's sales.<sup>152</sup> Because of the lack of proof, courts often allow recovery of a royalty only with respect to the number of sales that infringers admit.<sup>153</sup>

Another reason is that Japanese courts attempt to limit the royalty rates to a minimum. First, if there is a prior license for acts comparable to those engaged in by the infringer without authority, courts do not award a reasonable royalty more than the royalty rate that was agreed upon in the legally negotiated license.<sup>154</sup> In other words, the royalty rate for the prior license functions as the maximum recovery. Although many courts adopted the prior royalty rates as a reasonable royalty,<sup>155</sup> a significant number of courts reduce the awarded rate to the lower of two published royalty rates (if either was lower than the prior royalty):<sup>156</sup> (1) the rate published by the Japanese Patent Office for licensing government owned patents;<sup>157</sup> and (2) the

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149. In a few older cases, courts did not award any damages even though they found infringement. *Tsugami Seisakusho v. Taiyo Seiki Seisakusho*, 185 HANREI TAIMUZU 209 (Tokyo Chiho Saibansho 1965). However, patentees in these cases only claimed lost profits and did not claim a reasonable royalty.

150. IIP DAMAGES REPORT, *supra* note 74, at 39.

151. *Id.*

152. *See supra* Part I.C.1.b.

153. IIP DAMAGES REPORT, *supra* note 74, at 40.

154. *Id.* at 41. Courts consistently rejected patentees' arguments to adopt a rate higher than the legally negotiated prior royalty rate. *Id.*

155. *Id.* at 41. Courts adopted prior royalty rates in 29 cases out of 90 cases (32.2%).

156. *Id.* at 40.

157. HATSUMEI KYOUKAI KENKYUSHO, JISSHIRYOU RITSU [ROYALTY RATES] 159 (4th

industry-standard royalty rate published by a quasi-governmental research institution.<sup>158</sup>

In contrast, reasonable royalties awarded by United States courts are much more than the reasonable royalties awarded by Japanese courts. Under United States patent law an existing royalty rate agreed upon between the patentee and its licensees is important evidence for deciding a reasonable royalty rate.<sup>159</sup> United States courts have developed case law that lists five conditions for qualifying a prior-license royalty as the “established” royalty, and courts should not award damages less than the royalty once the patentee shows the established royalty.<sup>160</sup> The royalty must be: (1) paid or secured before the infringement; (2) paid by a sufficient number of licensees to indicate a general acquiescence in its reasonableness; (3) uniform in the region where issued; (4) not paid under threat of suit or in settlement of litigation; and (5) in consideration of comparable rights or activity under the patent.<sup>161</sup>

In recent cases United States courts began to frequently deny the presence of an “established” royalty as being artificial and instead adopt a royalty higher than that for prior licenses.<sup>162</sup> The motivating reason for United States courts to award higher royalties is to deter infringement. If a court awards damages equal to the royalty of a legally negotiated license, then infringers can save the trouble of negotiating licenses and benefit from infringement. To prevent this, the established royalty functions as a minimum recovery.<sup>163</sup>

When no established rate exists, United States courts, like Japanese courts, give considerable weight to the royalty rate of a prior license even if the rate is not qualified as being “established.”<sup>164</sup> However, the practice of United States courts contrasts with Japanese

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ed. 1993).

158. *Id.*

159. For a general discussion of the established royalty rate, see CHISUM, *supra* note 40, § 20.03[2].

160. *Id.* § 20.03[2] [c].

161. See *Rude v. Wescott*, 130 U.S. 152 (1899); *Faulkner v. Gibbs*, 199 F.2d 635 (9th Cir. 1952).

162. *Nickson Indus., Inc. v. Rol Mfg. Co. Ltd.*, 847 F.2d 795 (Fed. Cir. 1988).

163. *United States Nat'l Bank of Portland, Oregon v. Fabri-Value Co. of Am.*, 235 F.2d 565 (9th Cir. 1965). For a general discussion, see CHISUM, *supra* note 40, § 20.03[2][c].

164. CHISUM, *supra* note 40, § 20.03[3][b][i].

courts because United States courts gives less weight to an industry standard of royalty for a license of comparable technology.<sup>165</sup> Instead, they heavily rely on particular license policies and arrangements selected by the patentee for the infringing patent and related technology fields. In particular, if the patentee has chosen not to license the patent in order to benefit from exclusivity, courts increase the “reasonable royalty” because otherwise it would result in a compulsory license to the infringer.<sup>166</sup> United States case law frequently adopts a definition of reasonable royalty as that which would have resulted from a hypothetical negotiation between a willing patent owner and a willing potential user.<sup>167</sup> However, the royalties granted by United States courts are much more than reasonable, which often leaves no profits for infringers, and can even force them into bankruptcy.<sup>168</sup>

This is in stark contrast to the practice of Japanese courts of adopting a minimum royalty published by the JPO for patent damages in cases where the patentee never licensed the patent. As a result, average damages in the form of reasonable royalty awarded by United States courts, 11%,<sup>169</sup> is significantly higher than the average rate of 4.2% awarded by Japanese courts. Moreover, United States rates are spread over a wider range from less than 1% to more than 20%.<sup>170</sup>

#### b. Absence of Prior License

Absence of prior license leads to vast differences in United States and Japanese damages. Typically, like the Tokyo District Court in the *Golf Cart Monorail System Case*, if the patentee has not licensed any comparable technology and has no information for calculating a royalty rate, courts tend to rely on the JPO’s published rate. Accordingly, cases adopting the JPO’s royalty rates occupy a

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165. *Bio-Rad Laboratory Inc. v. Nicolet Instrument Corp.*, 739 F.2d 604 (Fed. Cir. 1984).

166. *King*, 65 F.3d at 950.

167. CHISUM, *supra* note 40, § 20.03[3][a].

168. *See, e.g., Radio Steel*, 788 F.2d at 1554; *Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572, (Fed. Cir. 1996).

169. IIP DAMAGES REPORT, *supra* note 74, at 67.

170. CHISUM, *supra* note 40, § 20.03[3][d].

significant portion of all cases awarding damages in the form of a reasonable royalty.<sup>171</sup> Because the JPO's royalty rates are kept to a minimum, in order to encourage transfer of technology from government to industry, the average rate of reasonable royalty awarded by Japanese courts is very low (4.2%),<sup>172</sup> even lower than the average rate under the industry-standard of reasonable royalty (4.6%).<sup>173</sup>

In contrast, United States courts give less weight to industry standard<sup>174</sup> and more weight to the patent owner's licensing policy.<sup>175</sup> Absence of prior license gives United States courts an opportunity to increase a royalty rate because it may be viewed by United States courts as evidence that the patentee adopted a policy not to license others to use right exclusively. An award of a reasonable royalty determined by the market would result in a compulsory license on patentees who have never wanted to license. Thus, to avoid such a result, court tends to award a rate greater than what would have been reached by willing licensee and licensor.<sup>176</sup>

In the *Golf Cart Monorail System Case*, the Osaka District Court adopted the JPO's published royalty rate because the registrant did not license the utility model to anyone.<sup>177</sup> The court further reduced the rate by the contribution rate, 80%. If the case had been litigated in a United States court, the court would have granted the maximum royalty rate because of several factors that make it necessary for an increased royalty to adequately compensate the registrant's damages. The first factor is the registrant's absence of prior license. Another factor is that the infringer has to be ordered by a court to pay damages, instead of agreeing to a reasonable royalty. By doing so, the infringer saves negotiation cost. Furthermore, the entire-market-value rule would have prevented the court from reducing the royalty by the

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171. IIP DAMAGES REPORT, *supra* note 74, at 41. 21.1% of all cases that awarded reasonable royalties adopted the JPO's published rates. *Id.*

172. *Id.* at 41.

173. KENKYUUSHO, *supra* note 157, at 22-23.

174. CHISUM, *supra* note 40, § 20.03[3][b][iii].

175. *Id.* § 20.03[3][b][iii].

176. *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152 (6th Cir. 1978); *Georgia-Pacific Corp. v. United States Plywood Corp.*, 318 F. Supp. 1116 (S.D.N.Y. 1970).

177. *Hankon Kousan K.K. v. Monoreru Kougyow K.K.*, 1078 HANREI JIHÇ 117 (Osaka ChihÇ Saibansho 1983).

contribution rate.

Specifically, the defendant in the *Golf Cart Monorail Case* visited and saw the registered monorail system before developing the infringing monorail. This fact strongly suggests the defendant's willful infringement of the registered utility model. If a jury found willful infringement, the punitive damage provision in the second paragraph of 35 U.S.C. § 284 would have enabled a district court to increase the actual damages up to three times. Given the same facts, United States patent owners are awarded much larger damages than Japanese patent owners.

## II. POST-1998 LAW

### *A. New Direction: SmithKline Cimetidine*

To enforce its pro-patent policy, the Japanese Patent Office has recently published a series of reports that review patent infringement damages awarded by Japanese courts. One report proposes that the patent statutes should be revised to do the following: (1) shift the burden of proof to the defendant once the patentee shows causation with a reasonable probability; (2) make it possible for a patentee to recover lost profits regardless of the patentee's exploitation of the patent; (3) award a royalty greater than what would have been agreed to by legally negotiated licensees; (4) in cases of willful infringement, give courts the power to increase damages up to three times the amount found as compensatory damages; (5) adopt the entire-market-value rule to extend damage recovery to the entire product and convoyed sales.<sup>178</sup> Obviously, these proposals were strongly influenced by Federal Circuit case law doctrines.

Because the JPO has extensively published their intent to revise the Japanese Patent Statute to implement the proposal, Japanese courts responded to the JPO's pro-patent policy quickly. In *SmithKline Cimetidine*,<sup>179</sup> the Tokyo District Court granted \$23.5

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178. INDUSTRIAL PROPERTY RIGHT COMMITTEE, JAPANESE PATENT OFFICE, TOKYO HOU TOU NO KAISEI NI KANSURU TOSHIN [INVITATION OF COMMENTS ON THE PROPOSAL FOR REVISING PATENT LAW AND OTHER INDUSTRIAL PROPERTY LAWS] (1997).

179. *SmithKline & Beecham French Laboratories Ltd. v. Fujimoto Seiyaku*, 1653 HANREI JIHO 54 (Tokyo Chiho Saibansho 1999). A case comment on this case by a Japanese legal

million in lost profits damages despite many factors that would have worked favorably to the accused infringer, if the court followed the traditional Japanese patent infringement damages. The patentee in the *Smithkline Cimetidine* case, Smithkline & Beecham French Laboratory (SKF) and its subsidiary, Smithkline Beecham Seiyaku K.K. (SBS) jointly sued a Japanese generic drug manufacturer, Fujimoto Seiyaku K.K. SKF owned a Japanese patent (Japanese Patent No. 1,062,766) for a process producing a chiano-guinidine compound called “cimetidine,” a pharmaceutical product that effectively treats ulcerative diseases. SBS is the exclusive licensee of the ‘766 patent for selling the compound in Japan under the trademark “Tagamet.” The only claim of the ‘677 patent identified a compound as starting material that would react with amine described by  $R1NH_2$  to produce a compound described by the formula: 1-chiano – 2 –methyl – 3 - [2-[ ( 5 – methyl – 4 -imidazol) methylthio] ethyl] guanidine.

The accused infringer, Fujimoto, did not produce the accused product. Instead, it imported the product from Yugoslavia (Slovenia) and sold it in Japan. Because the patent at issue relates to a process, it was difficult to establish how the products were made outside Japan. Because of the lack of effective measures to collect evidence under Japanese Civil Procedure,<sup>180</sup> Patent Law article 104 remedies this difficulty and provides conditions to shift the patentee’s burden of proof to the defendant.<sup>181</sup> In short, if the product was not publicly known as of the filing date of the process patent at issue, it is presumed to have been produced by the patented process.<sup>182</sup> Thus, the provisions allowed the plaintiffs to show that Fujimoto’s cimetidine was produced by its patented process by showing that the cimetidine was not publicly known on the priority date of the Japanese patent application.

Fujimoto argued that SKF’s ‘766 patent was not entitled to the

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scholar is published in 484 HANREI HYORON 211 (1999). An English summary of this judgement was reported in 5-3 CASRIP NEWSL. 7 (1998).

180. The lack of discovery system was discussed *supra* Part I.

181. Tokkyo Ho [Patent Law], Law No. 121 of 1958, art. 104.

182. For an interpretation of the provision by the JPO, see JAPANESE PATENT OFFICE EDITION, KOUGYOU SHOYUUKEN HOU CHIKUJO KAISETU [ANNOTATED INDUSTRIAL PROPERTY RIGHT LAWS] 243 (13th ed. 1996).

benefit of a priority date because the '776 patent was not based on a first application in a Paris Member State and thus failed to meet the requirements necessary to enjoy the priority right.<sup>183</sup> Cimetidine was publicly known as of its actual Japanese filing date and thus SKF cannot rely on article 104 to show that Fujimoto's cimetidine was produced by the patented process. In arguing for rejection of the priority benefit, Fujimoto contended that SKF filed two U.K. applications (filed on March 9, 1971, and July 22, 1971) earlier than the U.K. applications (filed on September 5, 1972, and February 8, 1973), which the priority of the '677 patent is based, and the earlier U.K. applications also disclosed the patented cimetidine. Although the earlier U.K. applications disclosed a genus compound of cimetidine, but did not expressly disclose cimetidine and its manufacturing process, Fujimoto believed that one skilled in the art would have readily produced cimetidine from the disclosure in the earlier U.K. applications.<sup>184</sup>

This was supported by SKF's filing of a divisional application based on another Japanese application (filed March 9, 1972), which enjoyed the priority date of the earlier 1971 U.K. applications. Although the divisional application expressly described the cimetidine and its manufacturing process as embodiments, the divisional application was allowed to enjoy the 1972 Japanese application's original 1971 U.K. priority date. This indicated that the JPO's view was that the inclusion of cimetidine, and its process, in the application were understood by one skilled in the art and thus the divisional application did not introduce new matter. Because the application of the '677 patent is not based on the first application in Paris Member States, the earlier 1971 U.K. applications, but is based on the later 1972/1973 applications, Fujimoto argued that the '677 patent fails to meet the requirements for enjoying the priority. Without enjoyment of the priority date, the '677 patent's application date should move back to its actual Japanese filing date, September 5, 1973. Because the 1972 Japanese application implicitly disclosing cimetidine was laid open to public on December 16, 1972, cimetidine was publicly known as of its filing date and SKF cannot rely on

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183. Paris Convention, article 4C(2).

184. See 1653 HANREI JIHO, at 58.

article 104 to show infringement of the process patent.<sup>185</sup> In case the court was not persuaded by the argument, Fujimoto also introduced evidence to rebut the presumption of article 104.<sup>186</sup> To show that its product was produced by a process different from the '677 patent process, Fujimoto introduced production records of its product prepared by the supplier in Solvania.<sup>187</sup>

With respect to damages, the plaintiffs requested a total of 5,000 M Yen (\$38.5M), including: (1) lost profits with respect to SBS based on lost sales caused by Fujimoto; and (2) unjust enrichment with respect to SKF for failing to pay the 5% license royalty fees.<sup>188</sup> First, Fujimoto claimed that SBS was not the exclusive licensee of the '677 patent because several other Japanese companies sell cimetidine.<sup>189</sup> It also argued that there is no causation between sales of infringing products and SBS's reduced sales, stating that the significant reduction of SBS's sales resulted from the withdrawal of SBS's Japanese distributor from Tagemet's sales.<sup>190</sup> Particularly, Fujimoto emphasized the presence of an acceptable substitute, the entrance of "Zantac" and other non-infringing substitutes, reduced the sales of SBS's sales. Fujimoto further disputed the amount of the infringing products and the profits of SBS's product.<sup>191</sup> Additionally, it requested application of the three-year statute of limitations to earlier sales of infringing products.<sup>192</sup> With respect to claims based on unjust enrichment, Fujimoto viewed 5% as too high and requested a 2% royalty, that is the lowest published rate, within the 2-4% range, for licensing government-owned patents.<sup>193</sup>

The Tokyo District Court agreed with the plaintiff, found infringement by Fujimoto's product and accepted evidence produced by the plaintiff to calculate damages. In denying Fujimoto's argument

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185. *Id.*

186. An accused infringer can rebut the presumption by showing that the product was not made by a non-infringing process. *See* NOBUHIRO NAKAYAMA, CHUKAI TOKKYO HO GAISETSU [PATENT LAW ANNOTATED] 945 (2d ed. 1989).

187. 1653 HANREI JIHO, at 58.

188. *Id.* at 56.

189. *Id.* at 60.

190. *Id.*

191. *Id.*

192. *Id.*

193. 1653 HANREI JIHÇ, at 60.

with respect to losing priority, the court agreed with the plaintiff that the disclosure of the structure of a genus chemical compound would not enable one skilled in the art to understand a process of producing a species compound of the genus compound unless the species compound and its property are identified as well as a process of producing the compound are disclosed by discussing an embodiment of the process.<sup>194</sup> Since the earlier 1971 U.K. applications merely disclosed the structure of a generic compound of cimetidine, it did not disclose cimetidine itself or its manufacturing process. The court rejected Fujimoto's argument to view cimetidine implicitly disclosed in the 1971 U.K. application and thus did not introduce a new matter, stating that the proceeding of an application after pending in the Japanese Patent Office does not affect whether the application is entitled to the benefit of priority. The court also emphasized that the enjoyment of the priority should be determined objectively, based on the disclosure of the foreign application at issue.<sup>195</sup> Thus, the '766 patent enjoys the 1971 U.K. priority date. After confirming that cimetidine was not known as of the 1971 priority date, the court concluded that SKF could rely on article 104 presumption.

Article 104 shifts the burden to Fujimoto to rebut that its product was produced by SKF's patented process.<sup>196</sup> The Tokyo District Court viewed SKF's evidence more reliable than Fujimoto's evidence. SKF's evidence compared impurities included in the patented and accused products and that both products were made by the same process. In contrast, the court discounted the credibility of the production records prepared by Fujimoto's supplier and concluded that Fujimoto's product was produced by the '677 patent process.<sup>197</sup>

After upholding Fujimoto's liability, the court accepted most of the plaintiffs' arguments for determining damages. The court first agreed with SKF that Fujimoto needed to pay a reasonable royalty to SKF for its escape from paying a license royalty. It also agreed that SBS was the exclusive licensee of the '677 patent and entitled to the

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194. *Id.* at 64.

195. *Id.*

196. Tokkyo Ho [Patent Law], Law No. 121 of 1958, art. 104.

197. 1653 HANREI JIHÇ at 65.

recovery of its lost profits. The court recognized that SKF sued 26 Japanese companies to enjoin their sales of cimetidine.<sup>198</sup> It also acknowledged the fact that SKF later settled with six of them and included a promise not to sue for their future sales in exchange for receiving compensation. In refusing to view the settlement as a grant of licenses, the court explained that its reason was to avoid the unreasonable result that an exclusive licensee would lose its right of damage recovery once its patentee/licensor settled with an infringer.<sup>199</sup> The court did not want to treat former illegal infringers the same as legal licensees because otherwise, illegal infringers would benefit from the acts of lawful exclusive licensees.

With respect to the amount of infringing product sold by Fujimoto, the court accepted most of the plaintiff's arguments because Fujimoto refused to produce the accounting books necessary to calculate the sales of the infringing product.<sup>200</sup> The court also discounted the credibility of the amount relied on by Fujimoto because the amount in stock was extremely large compared with the total amount of imported cimetidine powder. Instead, the court calculated the amount of products sold by Fujimoto based on the total imported amount with a discount of a five percent loss during the process for converting powder into tablets.

In examining the recovery of SBS's lost profits, the court agreed that SBS lost sales of its patent product in same amount of infringing product sold by Fujimoto.<sup>201</sup> To calculate SBS's lost profits, the court calculated SBS's own net profits on its own product. After deducting direct costs (raw materials, license royalty fees, transportation, and distribution costs) and general management fees (advertisement, sales promotion cost, and contracting research cost), the court concluded SBS's net profits as 15%, 5.15 yen per tablet.<sup>202</sup> Thus, the court granted an award of lost profits by multiplying the net profits by the amount of Fujimoto's sales throughout the period between July 1990 and August 1993.

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198. *Id.* at 66.

199. *Id.* at 67.

200. *Id.*

201. *Id.* at 68.

202. *Id.*

The plaintiffs also claimed damages incurred after the expiration date of the '677 patent. Their argument is based on the accelerated reentry theory.<sup>203</sup> According to the theory, Fujimoto could not have entered the market for at least one year after the expiration date because it would have needed at least one year to obtain approval from the government to sell its generic version of the patented drug. However, the court rejected the plaintiff's claim, stating that the act of filing for an approval itself does not give rise to infringement.<sup>204</sup>

The court also agreed with the plaintiffs that causation exists between Fujimoto's infringement and SBS's lost sales. It rejected Fujimoto's argument because, although alternative products treating similar diseases were available on the market, the infringing product was exactly the same as the product resulting from the patented process, and the efficacy and properties of other products argued as alternative substitutes are different from those of the product made by the patented process.<sup>205</sup> The court also rejected Fujimoto's other arguments that its own market strategies resulted in sales of infringing products, stating that there was not sufficient evidence to support the argument.<sup>206</sup>

Finally, with respect to SKF's recovery of unjust enrichment, the court agreed that Fujimoto escaped the payment of a reasonable royalty to SKF to sell its infringing product. Between 5% relied on the plaintiff and 2% to 4% relied on Fujimoto, citing the JPO's published royalty rates, the court adopted a 3.5% royalty but did not give any reason why it adopted the rate.<sup>207</sup> The royalty was applied to the gross sales of infringing product. As a result, the Tokyo District Court awarded a total 3059.36 M yen (lost profits: 2559.36 M yen; unjust enrichment: 500.M yen; plus 5% statutory interests) to the plaintiff.

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203. Few United States district courts have adopted this theory. *See, e.g.*, TP Orthodontics Inc. v. Professional Positioners, Inc., 17 U.S.P.Q.2d (BNA) 1497, 1505-06 (E.D. Wis. 1990), *vacated in part*, 20 U.S.P.Q.2d 1017 (E.D. Wis. 1991), *aff'd*, 980 F.2d 743 (Fed. Cir. 1992); *see also* Amsted Indus., Inc. v. National Castings, Inc., 16 U.S.P.Q.2d (BNA) 1737, 1754 (N.D. Ill. 1990).

204. 1653 HANREI JIHÇ, at 69.

205. *Id.*

206. *Id.*

207. *Id.*

2. The Source of the New Direction: 1998 Patent Law Revision
  - a. The New Damages Provision May Have Introduced a Presumption Making the Recovery of Lost Profits Easier

The Tokyo District Court's attitude in *Smithkline Cimetidine* was in stark contrast with the Osaka District Court in the *Golf Cart Monorail System Case*. The former court simply rejected the defendant's argument, for a rejection of causation, as lacking sufficient evidence while the latter rejected the patentee's argument on causation for the same reason. This significant change in the attitude of Japanese courts is likely motivated by the change of policy in measuring Japanese patent infringement damages via the 1998 Patent Law revision.<sup>208</sup> Although *Smithkline Cimetidine* was decided before the effective date of the 1998 Patent Law revision,<sup>209</sup> the analysis adopted by the Tokyo District Court, in calculating lost profits, closely followed the new provision for calculating lost profits and the JPO's legislative intent.

For facilitating patentees to claim the recovery of lost profits and reduce the burden to show causation,<sup>210</sup> the JPO's 1998 revision added a provision that reads:

Where a patentee or exclusive licensee claims a recovery of damages to a person who negligently or willfully infringes patent right or exclusive license, provided that said person has assigned products which constitute infringement to a third party, said patentee or exclusive licensee, the patentee may claim to recover damages equal to the amount of the profits per unit of goods that would have been sold but for the infringement multiplied by the number of said assigned goods (hereinafter, "the number of assignment") as long as the amount does not extend to the ability to exploit the patented invention of said patentee or exclusive licensee. However,

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208. Tokkyo Ho [Patent Law], Law No. 51 of 1988.

209. The 1998 revision took effect on January 1, 1999.

210. For the legislative intent explained by a JPO official, see Yasukazu Irino, *Tokkyo Hou Tou no Ichibu wo Kaisei suru Houritsu* [A Law for Revising Part of Patent Law and Other Industrial Property Laws], 1140 JURISTO 71 (1998).

where circumstances indicate that said patentee or exclusive licensee would have been unable to sell all or some of said assigned goods, courts should deduct the unsold number from the number of assignment.<sup>211</sup>

This provision is significant because it indicates the JPO's effort to increase the use of lost-profits damages to remedy Japanese patents. For the first time, the option of lost profits is expressly for it the patent statute. The new provision for lost profits was inserted in paragraph one, and the existing provisions for defendant's profits and reasonable royalty were moved to paragraphs two and three, respectively. The insertion of the new provision in the first paragraph may be interpreted as announcing a change of policy in measuring patent infringement damages in Japan. Moreover, under Japanese rules of statutory construction, a general rule is normally followed by exceptions to the general rule.<sup>212</sup>

This provision can be interpreted as establishing either a presumption with the possibility of rebuttal, *suitei*, or a presumption of no possibility of rebuttal, *minashi*.<sup>213</sup> Reflecting the expected changes in article 102, the *Smithkline Cimetidine* court might have viewed this legislative development as creating a positive test for claiming lost profits, and as effectively removing the heavy burden of proof to establish causation. This view is clearly supported by the legislative intent published by a JPO official.<sup>214</sup> If the provision were interpreted to provide conditions that gave rise to a presumption and shifted the burden to an accused infringer, such interpretation would make establishment of lost profits in Japanese courts even easier than in United States courts. Literally interpreted, the new provision requires a patentee to show only two of the *Panduit* four factors: (1) the patentee's capability to manufacture and sell; and (2) its own profits and the number of infringing products.<sup>215</sup> The burden then

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211. Tokkyo Ho [Patent Law], Law No. 51 of 1988, art 102, para.1 (author's translation).

212. NOBUTOSHI TAJIMA, HOUREI NO DOKUKAI HO [METHODOLOGIES FOR INTERPRETING STATUTE] 109 (1980).

213. SANSHUSHA EDITION, HORITSU YOGO HAYAWAKARI JITEN [QUICK LEGAL TERM DICTIONARY] 202 (1998).

214. For a general discussion on the legislative history of the 1998 Revision, see Irino, *supra* note 210, at 71.

215. For the four factors of the *Panduit* test, see *supra* note 126 and accompanying text.

shifts to the infringer to show that the number of infringing products should be reduced. Under Japanese civil procedure, a presumption shifts not only the burden of going forward with evidence but also the burden of persuasion.<sup>216</sup>

This means that the new provision does not require the most controversial factor under United States case law, the existence of an acceptable non-infringing substitute. For United States infringers, the presence of an acceptable substitute is the best defense to prevent a recovery of lost profits.<sup>217</sup> The case law is not clear as to what degree of similarity is necessary to meet the definition of acceptable substitute, although many courts have applied a strict identity standard.<sup>218</sup> When courts find an acceptable substitute, patentees may substitute the alternative substitute element with proof of the patentee's market share.<sup>219</sup> However, the patentee may fail to show causation because the patentee must show, with a reasonable possibility, that it could have made the sales based on the market share but for infringement.<sup>220</sup> Furthermore, the case law is not clear as to whether a patentee may recover lost profits if the patentee did not choose to use its right exclusively but instead gave a license to a competitor.<sup>221</sup> Accordingly, removal of the acceptable substitute factor deprives infringers of their only effective defense against claims of lost profits.

The acceptable substitute has been the most effective defense for Japanese infringers, as it negates causation and completely prevents a

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216. HIDEYUKI KOBAYASHI, SHIN SHOUKO HOU [NEW EVIDENCE RULE] 168 (1998). The effect of a presumption under U.S. law is to shift the burden of going forward with evidence only. FED. R. EVID. 301. The Federal circuit's *Panduit* test gives only an inference of causation. An inference is distinguished from a presumption in J. W. MOORE, MOORE'S FEDERAL PRACTICE § 2.05[2] (2d ed. 1991).

217. A legal commentator cautioned the use of an acceptable substitute factor in the *Panduit* Test in examining lost profits. See Allan Littman, *Monopoly, Competition and Other Factors in Determining Patent Infringement Damages*, 38 IDEA 1 (1997).

218. See CHISUM, *supra* note 40, § 20.03[1][b][v][E].

219. *State Industries*, 883 F.2d at 1473. For a general discussion of the market-share rule, see Christopher Marchese, *Patent Infringement and Future Lost Profits Damages*, 26 ARIZ. ST. L.J. 747 (1994).

220. *Bic Leisure Products, Inc. v. Windsurfing Int'l, Inc.*, 1 F.3d 1214, 1218-19 (Fed. Cir. 1993).

221. See, e.g., *Seymour v. McCormick*, 57 U.S. 487 (1853); see also Irah Donner, *Bic Leisure v. Windsurfing: The Federal Circuit Catches the "Big One" and Leaves the Supreme Court on Shore to Dry*, 4 FED. CIR. B.J. 167 (1994).

recovery of lost profits. Knowing the dreadful effect of the negative test, the JPO intentionally removed the factor from the new provision and lowered the barrier to recovery of lost profits.<sup>222</sup> The JPO intends that negative factors developed under the pre-1998 law, including the presence of acceptable substitute, will function only to reduce the amount determined in accordance with the first sentence of the provision.<sup>223</sup> Courts will reduce the amount established by the patentee only when infringers can produce evidence that is sufficient to show the presence of a substitute or any special circumstance that prevents patentees from making infringing sales but for infringement.<sup>224</sup> The *Smithkline* court's eagerness to calculate damages based on the patentee's net profits and the defendant's sales and reluctance to accept the defendant's evidence to show the amount that would not have been sold parallels the JPO's legislative intent.

It is still arguable that the first sentence of the new paragraph one imposes the burden to show causation on the patentee with respect to the number of assigned goods that would have been sold but for infringement.<sup>225</sup> In other words, if this interpretation is adopted, Japanese courts must reject a claim for recovery of lost profits, if the patentee is unable to show the number of assignment. However, such an interpretation directly conflicts with the JPO's legislative intent. The *Smithkline Cimetidine* court may have compensated the patentee more than a United States court would have.

Following the spirit of the new provision, the *Smithkline* court very likely compensated the patentee more than a United States court would have compensated the patentee. If a United States court decided *SmithKline*, the patentee should have overcome several hurdles to recover lost profits for all the infringing products sold by the accused infringer. First, United States courts would have found acceptable non-infringing, alternative substitutes and thus the patentee would not have been able to rely on the *Panduit* test to infer causation. The *Smithkline* court simply denied the accused infringer's

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222. Irino, *supra* note 210, at 72.

223. *Id.*

224. *Id.*

225. Tokyo Ho [Patent Law], Law No. 51 of 1988, art. 102, para. 1. For the author's translation, see *supra* note 211.

argument that ranitidine sold as “Zantac” and famotidine sold as “Gaster” were acceptable, non-infringing substitutes, stating that they are not structurally the same as cimetidine and result in a different pharmaceutical effect.<sup>226</sup> The same argument, however, would have likely persuaded a United States court to find an acceptable, non-infringing substitute.

In cases involving Histamine 2 antagonist drug patents, United States courts recognized the better pharmaceutical effects of ranitidine and famotidine over cimetidine.<sup>227</sup> They are particularly keen to the exceptional market success of Zantac (ranitidine).<sup>228</sup> A United States court’s due consideration to the entrance of generic versions, cimetidine and ranitidine, into the market in examining the commercial success of famotidine is in stark contrast to the *Smithkline* court’s ignorance to the presence of ranitidine and famotidine in the market when examining the sales of cimetidine.<sup>229</sup> Although the similarity of the products sold by the infringer and patentee is one of very few positive tests for causation under the pre-1998 revision case law,<sup>230</sup> the *Smithkline* court’s analysis focusing only on the similarity ignores the realities of the market. If these drugs have particular features that motivated consumers to purchase them, and would have likely captured sales made by the infringer, despite a difference in the drugs, the court should have denied causation because the but for test is not met.<sup>231</sup>

Second, the presence of generic drug makers who produce cimetidine by any process other than the patented process constitutes a non-infringing, alternative substitute after the expiration of the basic patent as long as the processes adopted by the generic manufacturer possessed substantially all the functional advantages of

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226. 1653 HANREI JIHÇ, at 69.

227. *Yamanouchi Pharm. Co. v. Danbury Pharmacal, Inc.*, 21 F. Supp.2d 366 (S.D.N.Y. 1998). The court noted that ranitidine is three to eleven times more active than cimetidine and famotidine is from twenty to thirty times more potent than cimetidine and does not exhibit the side effects and safety hazards indicated by cimetidine. *Id.* at 373.

228. *Glaxo Wellcome, Inc. v. Pharmadyne Corp.*, 32 F. Supp.2d 265, 269 (D. Md. 1998).

229. *Id.* at 374.

230. IIP DAMAGES REPORT, *supra* note 74, at 34.

231. *SmithKline Diagnostics, Inc. v. Helena Laboratories Corp.*, 926 F.2d 1161, 1166 (Fed. Cir. 1991).

the patented process.<sup>232</sup> The *Smithkline* court recognized that twenty-six companies began to sell generic versions of cimetidine after the expiration of the basic patent in 1992.<sup>233</sup> Against the patentee's claim for infringing the process patent, five of the generic companies agreed to pay money in exchange of allowing them to continue to sell their products. However, the agreement did not clarify whether the generic drug resulted from the patented process.

If the generic makers made cimetidine by a non-infringing process, regardless of the agreements of the parties, the presence of the drug after the expiration of the basic product patent would have prevented the patentee from meeting but for causation under the *Panduit* test. Thus, the court's analysis would have focused on whether the drugs were an infringing substitute. If the court found that the drugs were being made by a non-infringing process, the drugs should have constituted a non-infringing, acceptable substitute unless the patentee can show that the non-infringing process adopted by the generic drug makers was so inferior and thus not an acceptable, alternative process.<sup>234</sup> However, the Tokyo District Court did not examine whether the generic makers' drugs resulted from a patented process and denied the defendant's argument that SBS's lost sales resulted from the sales of these generic makers' cimetidine.

Even if the generic drug makers' cimetidine was resulted from the patented process, the patentee's settlement of third party generic drug makers also resulted in non-infringing, alternative substitutes. In *Pall Corp. v. Micron Separations Inc.*,<sup>235</sup> the Federal Circuit resolved the issue of how the patentee's settlement with third-party infringers affects the infringer-in-suit.<sup>236</sup> Although the court allowed the patentee to recover lost profits for all infringing sales before settlement, the infringing sales after settlement were only allowed a recovery of lost profits by the court. In respect to the patentee's market share, the court awarded a reasonable royalty for the third party licensee's market share. Interestingly, the *Pall* court clearly

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232. CHISUM, *supra* note 40, § 20.03[1][b][v][E].

233. 1653 HANREI JIHO at 66-67.

234. *Central Soya Co., Inc. v. George A. Hormel & Co.*, 723 F.2d 1573 (Fed. Cir. 1983).

235. *Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211 (Fed. Cir. 1995).

236. MARTIN ADELMAN ET AL., *CASES AND MATERIALS ON PATENT LAW*, 1123 (1998).

disagreed with the *SmithKline* court as to whether infringers were allowed to benefit from the patentee's settlement with other infringers. The *Pall* court rejected the patentee's argument to prevent infringers from benefiting from the settlement by noting that "injustice is inevitable, for the setting of the royalty rate and the discretion to multiply damages can assist in achieving a just remedy."<sup>237</sup> Thus, had a United States court decided *SmithKline*, the patentee would have needed to show its market share and would only recover lost profits for part of the infringer's sales. However, in the Tokyo District Court, the patentee avoided production of extensive evidence of market share and obtained a full recovery of lost profits.

If *SmithKline* is viewed to properly reflect the interpretation of the new provision, negative tests will no longer remain to cut causation completely. The negative tests from the pre-1998 revision case law will function only to reduce the number shown by the patentee. However, as the *SmithKline* court's reluctance to accept the presence of an alternative substitute clearly indicates, it will be difficult to persuade Japanese courts to find sufficient evidence of such reduction factors. This may result in a test even more effective than the United States courts' *Panduit* test for enabling recovery of lost profits.

### *B. Japanese Courts Increased Interest in Patent Litigation*

Another source of new direction expressed in the *SmithKline Cimetidine* case is Japanese courts' increased interests in patent infringement. In the past, Japanese courts paid very little attention to intellectual property infringement litigation because the number of actions brought to Japanese courts were very low.<sup>238</sup> The complexity of technology inherently involved in intellectual property legal issues naturally kept the courts at distance from intellectual property litigation. Although Japanese courts created special divisions to deal with IP cases in the Tokyo and Osaka District Courts and High Courts, Japanese judges were required to move one court to another

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237. *Pall Corp.*, 66 F.3d at 1223.

238. Mitsuyoshi Mochizuki, *Litigation Proceedings for Intellectual Property Cases*, 5 INST. OF INTELLECTUAL PROP. BULL. 77 (1996). Intellectual property cases accounted for only 0.3% of all civil actions between 1990 and 1994.

every two to three years.<sup>239</sup> This rotation system was introduced to avoid Judges' bias and corruption within the local community but prevented Japanese judges from developing expertise.

However, the JPO's campaign on pro-patent policy changed Japanese courts' attitudes toward patent and intellectual property litigation. To attract the courts' attention, the JPO published a series of reports on patent enforcement procedure in Japanese courts. An investigative report sponsored by the JPO compared the pending periods necessary for cases involving intellectual property disputes and those for all civil cases and emphasized a significant delay in the former cases.<sup>240</sup> The report also pointed out problems in procedure under the pre-1996 Civil Procedure. Another report highlighted the difficulty in receiving compensation of damages in the form of lost profits and revealed that most damages awarded by Japanese courts are as low as a legally negotiated royalty.<sup>241</sup> These reports resulted in an industry-wide discussion reviewing remedies for patent infringement.

Coincidentally, Japanese courts were undertaking a major revision of civil procedure.<sup>242</sup> Responding to criticisms from the patent community, Japanese courts extensively changed provisions relating to the courts' jurisdiction over cases involving intellectual property.<sup>243</sup> To remedy the lack of expertise problem, the 1996 Civil Procedure Law introduced a centralized system where courts can transfer patent and intellectual property cases to either the Osaka or Tokyo District Court, by request of the parties or on their discretion.<sup>244</sup> This means that most IP cases are then reviewed by judges in the IP special division at either the Osaka or Tokyo High Court. A *Joukoku* appeal from these courts are reviewed by the Supreme Court, where IP specialist judges serve as research

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239. For a general discussion of a Japanese judge's career path, see Michael K. Young & Constance C. Hamilton, *Introduction to Japanese Law*, in *LAW AND INVESTMENT IN JAPAN* 63 (Yanagida et. al., eds., 1995).

240. Mochizuki, *supra* note 238, at 78.

241. IIP DAMAGES, *supra* note 74, at 39.

242. See generally MINSOHÇ [Code of Civil Procedure], Law No. 109 of 1996.

243. For a general discussion of the changes in patent litigation practice after the revision, see Ryu Takayanagi, *Practices of Patent Litigation in Japanese Courts*, 5-2 CASRIP NEWSL. 13 (1998) available at <<http://www.law.washington.edu/casrip/newsletter/newsv5i2jp2.html>>.

244. MINSOHÇ [Code of Civil Procedure], Law No. 109 of 1996, art. 6.

associates, *Chosakan*, to assist Supreme Court Justices.<sup>245</sup>

The serious effort of Japanese courts to remedy these problems are clear from the significant increase in the number of judges appointed to special IP divisions. After the increase in judges, the Tokyo District Court now encompasses three special divisions, including three panels exclusively working on IP cases, and the Osaka District Court has one special division with one panel.<sup>246</sup> To deal with appeals from the Tokyo District Court and decisions of the Japanese Patent Office's Board of Appeals, the Tokyo High Court has one special division comprising three sections. The Osaka High Court has one "concentration" division that deals with IP cases and other complex cases in the Osaka High Court since the Osaka High Court only hears appeals from Osaka District Court.

Despite efforts of Japanese courts, the JPO was not satisfied. After the 1996 Civil Procedure revision, the JPO published a report and widely requested submission of comments on the current patent enforcement procedure.<sup>247</sup> In this report, the JPO pointed out a significant increase in the number of IP cases, compared with the total civil actions, and emphasized the increased significance in giving quick, efficient remedies for IP infringement. The report focused on insufficient remedies given by Japanese courts as highlighting the huge difference between damages awarded by Japanese and United States courts and a significant delay in disposing of IP cases.<sup>248</sup> The report looked into patent court systems in the United States, Germany, and United Kingdom and proposed to consider the possibility of creating a special patent court to remedy the lack of expertise.<sup>249</sup> Furthermore, as a part of 1999 Patent Law revision, the JPO enhanced the *Hantei* system, a trial for determining the technical scope of a claim, to give the JPO's view on the claim

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245. See Young & Hamilton, *supra* note 239, at 66.

246. For a general discussion of the court system, see Setsuko Asami, *Japan-U.S. Patent Infringement Litigation Practice: A Visit to the United States Court of Appeals for the Federal Circuit*, 5-3 CASRIP NEWSL. 9 (1998) available at <<http://www.law.washington.edu/casrip/newsletter/newsv513asami.html>>.

247. INDUSTRIAL PROPERTY RIGHT COMMITTEE, JAPANESE PATENT OFFICE, TOKYO HOU TOU NO KAISEI NI KANSURU TOUSHIN [INVITATION OF COMMENTS ON THE PROPOSAL FOR REVISING PATENT LAW AND OTHER INDUSTRIAL PROPERTY LAWS] (1997).

248. *Id.* at 38-39.

249. *Id.* at 128.

interpretation so that parties of patent disputes can take advantage of an inexpensive, quick dispute resolution system within the JPO.<sup>250</sup>

To show their ability to deal with IP cases in the current system, Japanese courts began to dispatch their judges to study patent litigation in leading countries.<sup>251</sup> One main reason for sending Judges is to learn proceedings to dispose patent and other IP cases quickly and effectively. Furthermore, the Supreme Court of Japan set up a special project team to reduce the delay in patent litigation.<sup>252</sup> Such an effort to give a quick, effective relief for infringement has resulted in a quick injunction against “e-One” computer given by the Tokyo District Court.<sup>253</sup> In short, Japanese courts have become a target of criticism from Japanese industry for its inability to grant quick, effective relief for IP infringement. The necessity of exhibiting their competence may have motivated the *Smithkline* court to grant exceptionally large damages for the patentee.

### III: WILL INCREASED DAMAGES HELP THE RECOVERY OF JAPAN’S ECONOMY FROM ITS LONG STANDING RECESSION?

#### *A. Increased Damages*

##### 1. More Frequent Awards Of Lost Profits

The new provision gives courts a lot of room to interpret the language and the power to balance the interests of patentees and competitors through case-by-case application. Because the *Smithkline Cimetidine* case is a district court case and an appeal has been filed with the Tokyo High Court, it is too early to decide its

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250. Tokkyo Ho [Patent Law], Law No. 41 of 1999, art. 71.

251. ASAHI SHINBUN, LEARN ABOUT PATENT INFRINGEMENT LITIGATION FROM FOREIGN COUNTRIES (1999).

252. NIKKEI SHINBUN, ACCELERATION OF PATENT LITIGATION PROCEEDING (1999).

253. Unpublished order (Tokyo ChihÇ Saibansho 1999) (Apple Computer filed an action in the Tokyo District Court based on unfair competition claim on August 24, 1999. After less than one month, the court granted a preliminary injunction against the accused infringer). A summary of this case is published in Toshiko Takenaka, *Quick and Effective IP Enforcement in Japanese Courts*, 6-2 CASRIP NEWSL. 4 (1999), available at <<http://www.law.washington.edu/casrip/newsletter/newshome.html>>.

significance.<sup>254</sup> It should be noted, however, that the panel deciding the case included the most senior patent judge<sup>255</sup> in the IP special division of the Tokyo District Court, the biggest patent division of all Japanese district courts. Further, the judgement was widely reported both nationally and internationally.<sup>256</sup> Thus, other courts may view the decision as a leading case to show the impact of 1998 revision, and may follow the interpretation in upholding the lost profit damage awards.

One possible result of the new damage provision is that the positive test may have removed the requirement that the patentee exploit the patented invention and further increased the chance to claim damages in the form of profits. In the *Smithkline Cimetidine* case, the defendant argued that whether the patentee's product resulted from the patented process was not clear and thus the patentee did not meet the exploitation requirement for claiming lost profits.<sup>257</sup> However, the court's analysis only focused on whether the defendant's product resulted from the patented process but did not examine whether the patentee exploited the patented process. This is in stark contrast with the Golf Cart case where the lost profits damage analysis began with an examination of whether the patentee itself has exploited the invention.

The fact that the *Smithkline Cimetidine* court paid little attention to the patentee's exploitation can be viewed as directly following the JPO's legislative intent in the 1998 Patent Law revision. In considering the revision, the JPO emphasized the need to remove the requirement and proposed possible provisions to enable courts to award lost profits even if the patentee does not exploit the patented invention.<sup>258</sup> The new provision actually adopted by the JPO states that only a patentee can recover the profits for products the patentee

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254. For a general discussion of the role of judicial precedents in Japanese legal system, see HIDEO TANAKA, JAPANESE LEGAL SYSTEM § 5 (1984).

255. Judge Toshiaki Iimura is the head of the 29th IP special division and the most senior judge among all judges appointed to the three IP special divisions in Tokyo District Court.

256. *SmithKline Wins Three Billion Yen Lawsuit*, JAPAN TIMES, Oct. 14, 1998.

257. 1653 HANREI JIHŪ at 59-60.

258. INDUSTRIAL PROPERTY COMMITTEE, SUBCOMMITTEE FOR REVIEWING DAMAGES, JAPANESE PATENT OFFICE, REPORT: STRONG PROTECTION OF INTELLECTUAL PROPERTY RIGHTS 60 (1989).

would have sold but for the infringement.<sup>259</sup> It does not expressly require that those products, sold or made by the patentee, embody the patent-in-suit.<sup>260</sup> However, the old provision did not expressly provide such requirement either.<sup>261</sup> Instead, Japanese courts, through their case law, developed the requirement.<sup>262</sup> Thus, it will be up to Japanese courts to decide whether they will interpret the silence on that requirement as the legislature's acquiescence to their current law. In other words, by not providing specific instructions, the legislature has given Japanese judges the opportunity to develop a new policy with respect to how extensively courts should allow patentees to recover lost profits of their products, even if the patented invention was not embodied in such products.

The elimination of the inventor's exploitation requirement may lead to a significant increase in the awarding of lost profit damages, which started an extensive debate in the United States patent community.<sup>263</sup> A review of United States cases reveals a variety of circumstances where courts have awarded lost profits to patentees even though none of the patentees' products embodied the patents-in-suit. *Scripto-Tokai Corp. v. Gillette Co.*,<sup>264</sup> a United States case, is an example of circumstances where Japanese courts might feel comfortable about allowing a recovery of lost profits without requiring the patentee to market the patented invention. In *Scripto-Tokai*, the patentee had two patents on different erasable ink technologies. The patentee manufactured and sold pens using one of the technologies and the defendant infringed the patent, which covered the other technology that the patentee had never commercialized. The District Court for the Central District of California rejected the alleged infringer's argument that the patentee had not marketed the product covered by the patent-in-suit.

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259. Tokkyo Ho [Patent Law], Law No. 51 of 1988, art 102, para. 1. For the translation of the new provision by the author, see *supra* note 211.

260. *Id.*

261. Tokkyo Ho [Patent Law], Law No. 51 of 1988, art 102.

262. MASUI & TAMURA, *supra* note 75, at 277.

263. In *King*, the late Judge Nies wrote a lengthy opinion, disagreeing with the elimination of the requirement. *King*, 65 F.3d at 953 (Nies, C.J., dissenting). See also Jonathan Spivey, *King Instruments Corporation v. Perego: Conflict in the Awarding Patent Damages*, 21 T. MARSHALL L. REV. 369 (1996).

264. 788 F. Supp. 439 (C.D. Calif. 1992.)

Distinguishing the Federal Circuit cases relied upon by the infringer, the court concluded that a patentee should be given an opportunity to show lost profits with a reasonable probability where the patentee markets a product directly competing with the infringing product.

Another example involving a patented invention that was not marketed by the patentee is *Carborundum Co. v. Molten Metal Equipment Innovation*, a case where the patent-in-suit related to a gas-injection apparatus.<sup>265</sup> The patentee did not market the entire apparatus but manufactured and sold a pump specially made for the apparatus. Although the pump was an element of the claims in the patent-in-suit, none of the claims covered the pump itself. As for the defendant's sales of a similar pump, the court upheld a claim of contributory infringement and awarded lost profits for the sale of the pump as well as its spare parts. Here, the patentee only partially exploited the invention. The court, however, allowed the patentee to recover for the lost sale of the patentee's product, which was a non-patented element of the patented invention, because of the direct competition between the patentee's product and the defendant's product.

Returning to our first example, *King*,<sup>266</sup> the patentee's single-reel tape loader did not use the reel changer, which included the splicing assembly that infringed the patent-in-suit. The Federal Circuit, nevertheless, awarded lost profits for the sales of the single-reel tape loader because it directly competed with the defendant's double-pancake loader that embodied the reel changer covered by the patent-in-suit. With respect to only the patented and infringed part, the splicing assembly in the reel changer, the patentee did not produce a competing product. However, the majority viewed the entire magnetic-tape loader as being the reel changer part of the machine, and awarded lost profits for the entire machine, relying upon the fact that the patentee's loader directly competed with the defendant's loader. In *King*, the patentee did not market the reel changer. Additionally, whether the defendant's and the patentee's loaders were competing products was questionable because the patentee's loader did not include the reel changer. In circumstances like *King*, Japanese

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265. 72 F.3d 872 (Fed. Cir. 1995).

266. *King Instruments Corp. v. Peregó*, 65 F.3d 941 (Fed. Cir. 1995).

courts may be more reluctant to award lost profits than in a case dealing directly with a competing substitute, as discussed in *Scripto-Tokai*.<sup>267</sup>

In short, Japanese courts have a long-standing practice of automatically rejecting lost profit claims as soon as they find that the patentee does not market any products embodying the patented invention at issue. Thus, they did not need to deal with the variety of complex economic circumstances surrounding the patented product in the market. Once they discard this practice, Japanese courts will need to start examining all of these complexities. However, it is doubtful that they are ready to deal with these issues. Even the Federal Circuit has not been able to set a clear line as to how far a patentee can recover for lost sales of products which do not embody any of patented invention at issue.<sup>268</sup>

## 2. Expansion of Damage Scope

Another area where Japanese courts have been given room to increase damages is in deciding whether to adopt the entire-market-value rule, and thereby avoid complex apportionment issues.<sup>269</sup> The new provision does not expressly deal with this issue either.<sup>270</sup> However, one can interpret the language of the provision as shifting any burden, for reducing the amount shown by the patentee, to the defendant, including the fact that the patented invention only partially contributes to the sale of the entire market. In fact, for United States practitioners who are familiar with the historical developments of the doctrine of apportionment in United States courts, the *Smithkline Cimetidine* case can be viewed as a case applying the entire-market-value rule.

In *Smithkline*, the Tokyo District Court allowed the recovery of profits for the entire product during the period of the accused

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267. 788 F. Supp. at 439.

268. Toshiko Takenaka, *Patent Infringement Damages after Rite-Hite*, 4-1 CASRIP NEWSL. 4 (1997) available at <<http://www.law.washington.edu/casrip/newsletter/newsv4i1us2.html>>.

269. See *supra* Part I.

270. Tokkyo Ho [Patent Law], Law No. 51 of 1988, art 102, para. 1. For the translation of the new provision by the author, see *supra* note 211.

infringer's sales of its product, including the period after the expiration of the basic patent covering cimetidine.<sup>271</sup> As an apportionment issue, United States courts have dealt with the question of whether a patentee can recover for lost sales of products after the expiration of a product patent based on a surviving process.<sup>272</sup> This is because the contribution of the patent at issue was only the process of making a product, but not for the product, which had already been placed in the public domain. However, the development of the entire-market-value rule and the *Panduit* test made it possible for United States patentees to recover lost profits measured by sales of products made by the process even if the patent covering the product had expired.<sup>273</sup>

Although the *Smithkline* court's award of lost profits for the entire product was not motivated by the new provision, legal commentators had suggested allowing recovery for lost sales based on the entire-market-value rule, if the patentee established that the patented part produced the demand for the entire product.<sup>274</sup> This was not an extreme view because even before the 1998 revision Japanese courts, in exceptional cases, allowed recovery for an entire product based on a patent only partially covering the product.<sup>275</sup> The same theory may be applicable to extending recovery for the lost sales of non-patented spare parts, accessories, and conveyed goods.<sup>276</sup>

As clearly shown in the *King* case, the Federal Circuit's analysis in recent decisions can be viewed as shifting the burden to the infringer to prevent the application of the market-value test.<sup>277</sup> This practice is very controversial, introducing an unclear limit for the

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271. 1653 HANREI JIHÇ at 67-69.

272. CHISUM, *supra* note 40, § 20.03[1][v]. For the issues relating to "apportionment" under the old infringer profit measure of recovery, see *id.* § 20.02[4][a].

273. *State Industries, Inc. v. Mor-Flo Indus., Inc.*, 883 F.2d 1573 (Fed. Cir. 1989), *cert. denied*, 110 S. Ct. 725 (1990); *Central Soya Co., Inc. v. Geo A. Hormel & Co.*, 723 F.2d 1573 (Fed. Cir. 1983).

274. MASUI & TAMURA, *supra* note 75, at 295.

275. *Ando Card Kogyo v. Itoki Shoten*, 154 HANREI TAIMUZU 150 (Tokyo Chiho Saibansho 1964). In this case, the disputed patent related to an envelope for storing documents. However, the lost profits were measured by the price of card storage device in which the patented envelope was installed.

276. CHISUM, *supra* note 40, § 20.03[1][c][iv].

277. For a discussion of U.S. courts' application of the entire-market-value rule, see *supra* Part I.

scope of recovery.<sup>278</sup> However, Japanese courts may follow this recent trend in the Federal Circuit and interpret the new provision so that the apportionment of patented and non-patented parts constitutes “special conditions” in the second sentence of the revised law.<sup>279</sup> Because the second sentence is a provisory clause, the burden of showing such conditions is on the infringers, instead of the patentees.<sup>280</sup> Such interpretation not only makes the recovery of lost profits easy, by eliminating apportionment issues, but also expands the scope of damages that are recoverable as lost profits.

### *B. Increase in Reasonable Royalty*

In addition to these significant increases in the calculation of lost profits, the JPO’s revision also includes a change in the provision for calculating damages in the form of a reasonable royalty.<sup>281</sup> The new provision removed the term “ordinarily” from the definition of the amount received as damages in the form of a royalty.<sup>282</sup> Elimination of this term was designed to allow Japanese courts to take into account the circumstances of a particular case and grant a royalty higher than that available under the published industry standard rates or the JPO license rates for government-owned patents.<sup>283</sup> The policy behind this revision was that infringers should not be able to profit from their infringing acts by obtaining a license without making efforts to do so legally.<sup>284</sup> Reflecting this policy, Japanese courts may step outside the nondiscriminatory model of the legal licensee and infringer in order to grant a royalty higher than the published royalty.

278. Lisa Childs, *Rite-Hite Corp. v. Kelley Co.: The Federal Circuit Awards Damages for Harm Done to a Patent not in Suit*, 27 LOY. U. CHI. L.J. 665 (1996).

279. Tokkyo Ho [Patent Law], Law No. 51 of 1988, art. 102, para. 1. For the author’s translation, see *supra* note 211.

280. SHINDOU KOUJI, SHIN MINJI SOSHOU HOU [NEW CIVIL PROCEDURE LAW] 498 (1998).

281. Tokkyo Ho [Patent Law], Law No. 51 of 1988, art 102, para. 3.

282. *Id.* art 102, para. 2.

283. Irino, *supra* note 127, at 72.

284. *Id.*

### *C. Impact on Japanese Economy*

#### *1. Risks of Overcompensation*

The new damages provision may have created a scheme for consistently awarding damages exceeding the actual damages because Japanese courts may not develop a set of factors to reduce the amount calculated by the patentee according to the format in the first sentence of the new provision.<sup>285</sup> The second sentence of the new provision makes clear that infringers can rebut the amount established by the patentee if the infringer can show special conditions that would have prevented the patentee from selling its own product even without infringement.<sup>286</sup> However, because the second sentence is a provisory provision, the burden is on the defendant to show such a special condition and the amount that the patentee was prevented from selling.<sup>287</sup>

The pre-1998 law clearly indicates the difficulty faced by the patentee when trying to meet the burden of showing the number of products affected by infringement.<sup>288</sup> To recover lost profits, a showing of the sales affected by the infringer's sales was not sufficient.<sup>289</sup> The patentee needed to show how much of the infringing sales would have gone to the patentee but for the infringement.<sup>290</sup> The new article 102, paragraph one, may simply shift this difficult burden with respect to reduction of the amount of damages shown by the patentee. Thus, the same burden may also prevent infringers from showing causation between the special conditions and the scope of sales that otherwise would not have been sold by the patentee because of the conditions.

The difficulty of showing such special conditions is clearly indicated by the *Smithkline Cimetidine* court's refusal to consider arguments advanced by Fujimoto. These arguments include the

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285. Tokkyo Ho [Patent Law], Law No. 51 of 1988, art. 102, para. 1. For the author's translation, see *supra* note 211.

286. *Id.*

287. SHINDOU KOUJI, SHIN MINJI SOSHOU HOU [NEW CIVIL PROCEDURE LAW] 498 (1998).

288. See *supra* Part I.

289. MASUI & TAMURA, *supra* note 75, at 278.

290. *Id.*

presence of a non-infringing acceptable alternative, which functioned to prevent the recovery of lost profits completely under the pre-1998 damage provision.<sup>291</sup> Even under the new damage provision, the arguments should have functioned to reduce the number of assigned goods the patentee would have sold<sup>292</sup> because some infringing sales should have gone to licensed generic cimetidine, Zantac or Gaster. Under the Federal Circuit case law, these factors either function to reject the recovery of lost profits or, at least, to the reduction of lost profits by the market share.<sup>293</sup> However, the court avoided assessing the amount affected by the presence of these alternatives and refused to discount the amount shown by the patentee. If Japanese courts continue this practice, the infringer will be unable to establish the amount of any reduction because of the courts' refusal to develop measurements for assessments that exceed the actual damages suffered by the patentee.

In common law countries, several justifications for compensation exceeding actual damages are available.<sup>294</sup> In civil law countries, such as Japan, compensation exceeding the actual damages conflicts with both the purpose of damages under the general tort policy and with a Supreme Court decision.<sup>295</sup> Thus, if Japanese courts do not develop a practice for reducing the infringer's burden to show the amount of reduction, the overcompensation scheme created by the new damage provision will be incongruous with provisions dealing with other tort damages. This will, in turn, introduce significant confusion into the general tort theory of Japanese law.

Japanese legal commentators have emphasized the unique features of intellectual property, being intangible and difficult to protect from infringement, and they have justified the overcompensation scheme as a means of deterring future infringement and even punishing those

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291. See *supra* Part II.

292. Irino, *supra* note 210, at 72.

293. See *supra* Part II.B.1.b.

294. United States courts may award non-compensatory damages for (1) funding attorney fees for the plaintiff; (2) providing a sense of public sympathy for an injured person and (3) for providing incentives by adjudicating particular cases, DAN DOBBS, *LAW OF REMEDIES*, 211-12 (2d ed. 1993). With respect to punitive damages, the amount exceeding the actual damages serves both functions of deterrent and punishment. *Id.* at 322-27.

295. John A. Tessensohn, *Reversal of Fortune—Pharmaceutical Experimental Use and Patent Infringement in Japan*, 4 INT'L LEGAL STUD. 1 (1988).

who have infringed.<sup>296</sup> However, as properly noted by a late Federal Circuit judge, whether the increased damages operate to deter infringement is doubtful where infringers are innocent, those who began marketing the invention without any knowledge of the patent alleged to be infringed.<sup>297</sup> Further, if the overcompensation scheme is justified by the policy of deterrence, the applicability of the new provision must be limited to those who willfully infringed patents.<sup>298</sup> For innocent infringers, one can argue that courts may resort to the provision for reducing the amount of damages exceeding the amount that would be assessed as a reasonable royalty.<sup>299</sup> However, after the JPO's very effective campaign for a pro-patent policy and emphasis on the insufficiency of compensation by a reasonable royalty, it is very likely that courts will rely on the provision less frequently than they did under the pre-1998 damage provision.

The possibility of increased damages may be viewed as a sword of Damocles hanging over competitors with unpatented goods and may serve as a powerful means for extortion.<sup>300</sup> Such powerful patent protection may discourage "design around" activities, which the patent system always wants to encourage.<sup>301</sup> Particularly, an award of lost profits without the exploitation requirement encourages the patentee to keep patented products out of the market,<sup>302</sup> and would conflict with the goal of Japanese patent law: the encouragement of industrial developments through the disclosure and utilization of the invention.<sup>303</sup> This may also hinder the JPO's mission to increase the

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296. Kaoru Kamata et al., *Zadankai: Tokkyoho no Kaisei to Konngo no Doukou* [Revision of Patent Law and Future Developments], 1162 *Jurisuto* 8 (1999).

297. *King*, 65 F.3d at 959 (Nies, J., dissenting).

298. Art. 102, para. 1 is applicable both to willful and innocent infringement.

299. Tokkyo Ho [Patent Law], Law No. 51 of 1988, art 102, para. 4.

300. *King*, 65 F.3d at 959 (Nies, J., dissenting).

301. *Westvaco Corp. v. International Paper Co.*, 991 F.2d 735, 745 (Fed. Cir. 1993).

302. The late Judge Nies argued that the grant of patent is made upon the reasonable expectation that the patentee will either put his invention to practical use or permit others to do so. *Rite-Hite*, 56 F.3d at 1562-63 (Nies, J., dissenting). Some legal commentators noted a negative impact resulting from the removal of exploitation requirement. See Brent Rabowsky, *Recovery of Lost Profits on Unpatented Products in Patent Infringement Cases*, 70 S. CAL. L. REV. 281 (1996); Arun Chandra, Note, *King Instruments Corp. v. Perego: Should Lost Profits Be Awarded on Unpatented Products where Patentee Sits on Its Patents?* 16 *CARDOZO ARTS & ENT. L.J.* 635 (1998).

303. Tokkyo Ho [Patent Law], Law No. 121 of 1958, art. 1.

proportion of patented inventions actually exploited by the patentee.<sup>304</sup> A close examination of United States case law reveals the possibility of forcing innocent infringers into bankruptcy,<sup>305</sup> which may worsen what is already the worst unemployment rate in Japanese history.<sup>306</sup> In addition, the high risk of litigation and award of damages will very likely force Japanese patentees to raise the price of their products, which may further dampen the sluggish consumer demand in the current Japanese market.<sup>307</sup>

Finally, increased damage awards may encourage unnecessary litigation, which will lead to significant delays in the judicial process.<sup>308</sup> Because Japanese courts do not need to decide the invalidity issue<sup>309</sup> and have full power to decide the infringement issue,<sup>310</sup> Japanese courts are in a better position to decide the liability issue more quickly than United States courts. However, unlike the automatic rejection practice under pre-1998 law, the new damage provision requires Japanese courts to make case-by-case determinations whether infringement resulted in lost profits and to address the complex issues in assessing lost profits on a more frequent basis. This will also increase the time necessary to dispose

304. INDUSTRIAL PROPERTY RIGHT COMMITTEE, INTELLECTUAL PROPERTY SPECIAL SERVICES SUBCOMMITTEE, JAPANESE PATENT OFFICE, CHITEKI ZAIKAN SENMON SABISU SHOINNKAU HOUKOKUSHO [A REPORT FROM INTELLECTUAL PROPERTY SPECIAL SERVICES SUBCOMMITTEE] 10 (1999).

304. INSTITUTE OF INTELLECTUAL PROPERTY, BEIKOKU PURO PATENTO SEISAKU NO KENSHO [INVESTIGATION OF U.S. PRO-PATENT POLICY] (1999), reprinted in Yoshitake Kihara, *Beikoku Puro Patento Seisaku no Kensho* [INVESTIGATION OF U.S. PRO-PATENT POLICY] 39 INST. OF INTELL. PROP. F. 2 (1999) [hereinafter PRO-PATENT REPORT].

305. *Rite-Hite*, 56 F.3d at 1562-63 (Nies, J., dissenting).

306. *Stable Employment at May Day Rallies*, JIJI PRESS TICKER SERVICE, May 1, 1999.

307. *Economy & Politics*, NIKKEI WEEKLY, Jan. 31, 2000, at 4.

308. Robert Cox, *But How Far?: Rite-Hite Corp. v. Kelly Co.'s Expansion of the Scope of Patent Damages*, 3 J. INTELL. PROP. L. 327 (1996).

309. According to case law, the Japanese Patent Office has exclusive jurisdiction over the validity issue. There are two lines of cases that explain the rejection of courts' jurisdiction over the validity of issues. One line of cases rejects courts' power because courts do not have power to issue a decision extending to third parties. See *Soshiete De Yujinnu Shimiku Rohn Puran v. Yoshitomi Seiyaku Kawamoto v. Shinobe Seisakusho et al.*, 162 HANREI JIHŌ 23 (Osaka KŌtō Saibansho 1958). Another line of cases rejects courts because they are refrained from invading power exclusive to the Japanese Patent Office in deciding the fate of a patent, so as to maintain the separation of jurisdiction between the patent office, an administrative branch, and courts, the judicial branch. 543 HANREI TAIMUZU 263 (Osaka KŌtō Saibansho 1984).

310. Japanese courts do not use jury trials and thus have full power to decide both issues of fact and law.

patent cases, which may hinder the efforts by Japanese courts to accelerate the proceeding and shorten the time spent for disposal.<sup>311</sup> Since a quick injunction is what patent owners usually want and is what prevents extensive damages over the extended period of litigation, the efforts of the Japanese courts should concentrate on the examination of liability, rather than the calculation of damages.<sup>312</sup>

## 2. Overcompensation May Encourage Investment for Technology and Create New Businesses

Despite of the disadvantage and risks that may result from the overcompensation scheme, the increased damage awards may encourage investment in technology and assist in the establishment of start-ups and spin-offs based on their new technology. A research institute sponsored by the JPO conducted a series of interviews with United States leaders in the intellectual property law community and published a report, concluding that the patent system played an important role in the recovery of the United States economy from the recession in the 1970s.<sup>313</sup>

According to the report, the change in United States patent policy was symbolized by the creation of the United States Court of Appeals for the Federal Circuit and the improvement of organization and procedures in United States Patent and Trademark Office.<sup>314</sup> Many interviewees pointed out that the pro-patent policy increased incentives to invest in research and development, which led to the creation of new technology-based industries in the United States.<sup>315</sup> Particularly, many noted the significant impact on the pharmaceutical and biotechnology industries that resulted from *Chakrabarty*,<sup>316</sup> a Supreme Court decision affirming the expansive scope of patentable subject matter.<sup>317</sup> Some praised the enactment of the Bayh-Dole

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311. See *supra* Part III.B.2.

312. Eiji Katayama, *Zadankai: Puro Patento no Jidai wo Mukaete [Panel Discussions: Entering Pro-Patent Era]*, 38 INST. OF INTELL. PROP. F. 2, 10 (1999).

313. PRO-PATENT REPORT, *supra* note 304, at 2.

314. *Id.* at 9.

315. See, e.g., Michael Kirk, PRO-PATENT REPORT, *supra* note 304, at 27.

316. *Diamond v. Chakrabarty*, 447 U.S. 303 (1980).

317. Gerald Mossinghoff, PRO-PATENT REPORT, *supra* note 304, at 55.

Act,<sup>318</sup> which encouraged the transfer of publicly funded research results to industry.<sup>319</sup> Others noted that strong patent protection made it easy for technology-based startup companies to raise capital from the stock market.<sup>320</sup> Many agreed that the United States patent system favors technology-based startups, particularly individual inventors because of the jury system and the first-to-invent system.<sup>321</sup> Notably, one interviewee commented that these startups hire workers laid off by big companies and significantly contributed to the current low unemployment rate in the United States.<sup>322</sup>

These comments from the interviewees support the premise that the JPO's pro-patent policy contributed to MITI's important mission, to aid the recovery of Japan's economy from its long recession, through the development of new industries and businesses to create new jobs.<sup>323</sup> MITI enacted legislation comparable to the Bayh-Dole Act, which grants universities funds to establish technology-licensing offices. Through licenses, MITI intends to increase exploitation of inventions developed by universities and promote creation of technology-based start-ups and spin-offs.<sup>324</sup> Additionally, MITI introduced several measures to encourage entrepreneurs to establish technology-based startup companies.<sup>325</sup> Such measures include sponsoring seminars to train entrepreneurs, loans from public funds, and tax exemption for research and development costs.<sup>326</sup>

Further, the potential for increased damages may, in particular, contribute to the development of technology-based startups. Long delays in enforcement and limited monetary recovery of infringement damages led United States companies to view the value of Japanese patents as less than United States patents.<sup>327</sup> An increase in damages

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318. 35 U.S.C. § 200 (1994).

319. Egils Milbergs, PRO-PATENT REPORT, *supra* note 304, at 163.

320. Bruce Lehman, PRO-PATENT REPORT, *supra* note 304, at 45. Harold Wegner, PRO-PATENT REPORT, *supra* note 304, at 107.

321. Joseph Degrandi, PRO-PATENT REPORT, *supra* note 304, at 132.

322. *Id.* at 135.

323. Kaoru Yosano, *Japan's Challenge Toward 21st Century*, available at <<http://www.miti.go.jp/topic-e/e-menu-e.html>>.

324. HISAMITSU ARAI, TOKYO SENRYAKU JIDAI [ERA OF PATENT STRATEGIES] 150 (1999).

325. *See* <<http://www.miti.go.jp/topic-j/e-menu-j.html>> (last visited Nov. 26, 1999).

326. *Id.*

327. Daigaku Tou Gijutsu Iten Sokushin Ho [Law for Promoting Technology Transfer

resulting from the new damage provision, along with quick enforcement by Japanese courts, may increase the value of Japanese patents, which will make it easier for start-up companies to raise capital through the stock market and through licenses for its technologies.

Finally, the potential for increased damages also creates more job opportunities for lawyers and patent attorneys because it will give Japanese patentees more incentive to sue and increase the number of cases brought to Japanese courts. The promotion of technology transfer will also increase the need for license specialists.<sup>328</sup> Despite the significant increase in need expected for patent specialists, only lawyers, *bengoshi*, are qualified to engage in both litigation and licensing under the Japanese Bengoshi law.<sup>329</sup> However, only very few lawyers have a scientific background and are interested in intellectual property law.<sup>330</sup> Patent attorneys, *benrishi*, are only qualified to represent clients before the patent office and courts with respect to the patentability and validity issues, although the majority of patent attorneys have a scientific background and have experience dealing with technologies.<sup>331</sup> To represent clients with respect to infringement issues, they must jointly represent clients with lawyers.<sup>332</sup> To provide sufficient legal assistance to university technology licensing offices and to technology-based startups, the JPO is considering revisions to the law for patent attorneys, *benrishi*, to expand the scope of patent attorneys permissible duties.<sup>333</sup> If the JPO's proposal becomes law, patent attorneys will be qualified to

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from Universities], Law No. 52 of 1998; Sangyou Kassei Saisei Tokubetu Sochiho [Special Provisions for Recovery of Active Industry: Japanese Bayh Dole Act], Law No. 131 of 1999.

328. In Japan, private companies and government agencies handle a large portion of their legal work, including licensing and patent prosecution through law graduates not admitted to the bar. For a general discussion of the legal profession in Japan, see HIDEO TANAKA, THE JAPANESE LEGAL SYSTEM, 550 (1984).

329. Bengoshi Ho [Law for Attorneys], Law No. 105 of 1949, § 72.

330. For the qualification and legal education of Japanese lawyers, see HIDEO TANAKA, THE JAPANESE LEGAL SYSTEM, 566 (1984).

331. HIDEO TANAKA, THE JAPANESE LEGAL SYSTEM 564 (1984)

332. Benrishi Ho [Patent Attorney Law], Law No. 100 of 1999, art. 9.

333. INDUSTRIAL PROPERTY RIGHT COMMITTEE, INTELLECTUAL PROPERTY SPECIAL SERVICES SUBCOMMITTEE, JAPANESE PATENT OFFICE, CHITEKI ZAISAN SENMON SABISU SHOIINKAI HOUKOKUSHO [A REPORT FROM INTELLECTUAL PROPERTY SPECIAL SERVICES SUBCOMMITTEE] 10 (1999).

participate in license negotiations.

In short, MITI and the JPO expect the adoption of pro-patent policies, including increased damages, will promote the creation of technology-based business opportunities, and will lead to the revival of the Japanese economy. In their attempts to revive Japan from its long standing recession, MITI and the JPO imported a variety of measures for encouraging innovation that were implemented by the United States government in the 1970s and 1980s. However, because of significant differences in the culture and business environment between Japan and the United States, the measures that successfully contributed to the recovery of the United States economy may not work in Japan.<sup>334</sup> Furthermore, there is no evidence that such measures actually played an important role because the recovery might have resulted from simple luck.<sup>335</sup> All interviewees of the Pro-Patent Report agreed that there were other, more significant factors, including the cost reduction of United States industry and efficient use of human resources.<sup>336</sup>

Recently the pro-patent case law developed by the Federal Circuit has been a target for criticism by United States legal scholars.<sup>337</sup> Responding to these criticisms, the Federal Circuit began to change their own case law on claim interpretation and the doctrine of equivalents to reevaluate the balance of conflicting interests between the patentee and the public.<sup>338</sup> Thus, the Federal Circuit might reevaluate the case law on damages that the JPO adopted for the new provision.<sup>339</sup> In any case, it is too soon to decide whether the JPO's

334. Egils Milbergs, PRO-PATENT REPORT, *supra* note 304, at 168. United States leaders debated to adopt the industrial policy adopted by Japan's MITI but decided to adopt a different approach, which led to a current success.

335. Martin Adelman, PRO-PATENT REPORT, *supra* note 304, at 81.

336. PRO-PATENT REPORT, *supra* note 304, at 10.

337. *See, e.g.*, ROBERT L. HARMON, PATENTS AND THE FEDERAL CIRCUIT 684-740 (3d ed. 1994); Donald R. Dunner et al., *A Statistical Look at the Federal Circuit's Patent Decisions: 1982-1994*, 5 Fed. Cir. B.J. 151, 155 (1995); Allan Littman, *Restoring the Balance of Our Patent System*, 37 IDEA 545 (1997).

338. Toshiko Takenaka, *Harmonizing the Japanese Patent System with Its U.S. Counterpart Through Judge-Made Law: Interaction between Japanese and U.S. Case Law Developments*, 7 PAC. RIM L. & POL'Y J. 249 (1998).

339. Honorable Randall Rader, Remarks at the Seminar Sponsored by Kyoto Comparative Center (May 17, 1998) (emphasizing that the Federal Circuit would not grant damages which will not rely on a proper economic theory).

pro-patent policy and increased damages, in fact, will contribute to the recovery of the Japanese economy.

#### IV. CONCLUSION

The JPO's call for changes in Japanese patent infringement damages was successful in triggering debate in the patent community and in drawing the courts' attention to the new direction in patent policy. The revision of the patent statute signifies the new direction that the Japanese courts are very likely to follow and create an overcompensation scheme to deter future infringement. To maintain the traditional role of damages under the Japanese tort system and to prevent overcompensation, Japanese courts will need measures to reduce the infringer's burden to establish the amount that would not have sold even without infringement. However, such measurement will not be readily developed and may take some time, as they will be developed in the orderly course of case-by-case determinations.

Increased damages resulting from the overcompensation scheme may chill the competition from unpatented products or discourage the actual exploitation of patented inventions. At the same time, if the expectation of the JPO and MITI is correct, the increased damage awards will contribute to the recovery of the Japanese economy. In any event, both the JPO and MITI have taken all possible measures in the field of technology and industry policy, there is nothing we can do at this moment other than to leave the result to chance.