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The current approach, as applied by Zoltek v. U.S., to determine if the government has used a process patent under 28 U.S.C. 1498, is incorrect and should be amended.

In early 2006, the Federal Circuit Court of Appeals heard the case Zoltek Corp. v. U.S. In that case, the court decided that aggrieved patent owners could not seek justice under 28 U.S.C. 1498, the sovereign’s waiver of immunity to patent infringement, for a process patent\(^1\) used by the United States, where the government practiced at least one step outside the United States.\(^2\) This holding is unfair and against the legislative history of section 1498.\(^3\) In addition, the decision encourages the government to outsource production of articles made by a patented process overseas to avoid paying a license to the United States patent owner.\(^4\) To solve this injustice, the legislature needs to amend either section 1498 or the Patent Act.

The Zoltek decision highlighted two very important aspects of section 1498. First, it highlighted that there is a divergence between an infringer’s liability under 35 U.S.C. 271, the infringement section of the Patent Act, and 28 U.S.C. 1498.\(^5\) Any U.S. citizen or corporation is legally liable for using another U.S. citizen’s or corporation’s process patent under the Patent Act\(^6\), even if one step of a process patent was practiced outside of the United States. However, 

\(^1\) There are a few different classes of patents. The most common is a utility patent. Mainly, there are two types of utility patents. The first is a product patent covering only the product itself. The second is a process patent covering the process of making the product, but not the product itself. The process usually consists of multiple steps.

\(^2\) Zoltek Corp. v. U.S., 442 F.3d 1345 (Fed. Cir. 2006).

\(^3\) *Infra* Part I.B.


\(^5\) *Id.* (Illustrating that although a private actor would most likely be liable for infringement under 35 U.S.C. 271 under the same facts, the court in Zoltek held that the government was not liable under 28 U.S.C. 1498).

\(^6\) The Patent Act is Title 35 of the United States Code. Section 271 of the Patent Act defines the different way one can infringe someone else’s patent and the requirements to prove such infringement. This article will use “Patent Act” when referring to the Act in general and section 271 or 25 U.S.C. 271 when referring specifically to that section of the Patent Act.
the Zoltek decision did not hold the United States Government liable under the government’s waiver of sovereign immunity\(^7\) to patent liability because one step of Zoltek’s process patent was practiced outside the United States. The divergence between 35 U.S.C. 271 and 28 U.S.C. 1498 ultimately means that the government is less liable than a citizen is for the same act. This is contrary to the legislative history and purpose of both sections 35 U.S.C. 271 and 28 U.S.C. 1498.\(^8\)

Second, Zoltek highlighted an error in case law, which has compounded up to this point.\(^9\) The majority in Zoltek relied on *NTP v. Research in Motion, Inc.*\(^10\) *NTP* is just the last in a series of cases which have advanced what was originally an accidental mischaracterization of patent law.\(^11\) In *Motorola, Inc. v. U.S.*, the court attempted to reiterate the type of infringement covered by 28 U.S.C. 1498 as stated earlier in *Decca Ltd. v. U.S.* Instead of reaffirming *Decca*, the court actually said the opposite. *NTP* then used the misstatement as support for their position and the error became precedent. This propagation of erroneous case law has to stop.

The Zoltek judge’s misunderstanding of the history and purpose of 28 U.S.C. 1498 and the use of erroneous case law led to an unjust and inequitable result. Although these issues are serious, they are correctable. To solve this problem the legislature could amend 28 U.S.C. 1498 to resemble the section 271 of the Patent Act or add a section to Patent Act regarding governmental infringement.

\(^7\) The United States Government’s waiver of sovereign immunity in regards to patent infringement is expressed in 28 U.S.C. 1498. Sovereign immunity is the inherent power of a government to not be bound by its own laws, unless it specifically waives that power in regards to a specific law.

\(^8\) *Infra* Part II.B.

\(^9\) *Id.* at 1353, 1355-56.

\(^10\) *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1318 (Fed. Cir. 2005).

\(^11\) *Infra* Part III.C.ii.
This article will show how these two problems evolved, how the court in *Zoltek* relied on them in error, and how the United States can fix them. Part II shows the creation and evolution of the patent law and the government’s waiver of sovereign immunity. The evolution of section 1498 in relation to section 271 is instrumental to understanding the purpose of section 1498. The autonomy of each section also plays a crucial role for interpreting section 1498. Also, other countries patent laws are helpful for finding solutions to the problems exhibited in *Zoltek*. How other countries have drafted their patent laws can suggest ways to fix the United States’ patent laws. Part III presents each of the *Zoltek* judges’ opinions and part IV evaluates each one according to the history of section 1498 and the other opinions. Part V proposes solutions to fix the gap present in 28 U.S.C. 1498 and bring it back into harmony with the Patent Act. Finally, part VI concludes this article by describing the current uncertainty of the law, but provides hope that this problem can be rectified.

II. The Evolution of Patent Law Up To *Zoltek v. U.S.*

The history and purpose of the relevant United States Code Titles is important because each judge’s opinion on how to construe section 1498 depends on how they interpret the development of sections 1498, section 271, and the case law associated with each. Part II.A describes the Patent Act’s evolution. Then, part II.B discusses the development of the United States government’s waiver of sovereign immunity in relation to the Patent Act. Parts A and B show why the majority’s understanding of the Patent Act and 28 U.S.C. 1498 is incorrect. Part II.C will introduce the relevant case law and explore how it has progressed up to the time of *Zoltek*. The evolution of this case law leads to the use of *NTP* in the majority’s opinion. Finally, part II.D. offers an international comparative analysis to distinguish section 1498 from similar provisions of other countries in order to establish whether there are better alternatives available.
A. The Authority for and Creation of the Patent Act

When the country’s founding fathers created the United States Constitution, they included two rights they felt were paramount to the new country’s future. The first right is a grant of power to Congress “[t]o promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.” 12 The other right is a reservation of power forbidding the government from taking “private property . . . for public use, without just compensation.” 13 How these two rights work together is very confusing. 14

Congress exercised its new right, promoting the progress of science and useful arts, by creating the first patent act a year after the adoption of the Constitution. 15 Through the years, and numerous other amendments, the patent act was changed and refined until 1952, when it became what is essentially the current Patent Act. 16

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12 U.S. Const. art. I, § 8, cl. 8.
13 U.S. Const. amend. V.
14 The confusing nature of the relationship is evident both by the fact that not even the two judges that made up the majority in Zoltek could agree on how to arrive at the majority’s holding and had to write separate concurring opinions in addition to the majority opinion. 442 F.3d 1345. Another example is the erroneous line of cases starting with Decca and most recently ending with NTP. The fact an error was made trying to explain the difference between section 1498 and 271 shows how confusing those sections are and is further illustrated by the fact that no one has stopped it yet. Infra Part II.C.ii.
B. The Necessity of a Waiver of Sovereign Immunity in Regards to Patents

Before 1910, there was no express venue to bring an infringement claim against the government. Therefore, most patent owners had to proceed based on an implied-in-fact contract theory, which worked with limited success. Most of these challenges involved patents that the government used in military applications.

In 1910, the government finally provided aggrieved patent owners a venue to bring a claim against the United States for the unauthorized use of their patent. This made the government's liability for patent infringement equivalent to that of a private citizen. In William Cramp & Sons Ship & Engine Bldg. Co. v. International Curtis Marine Turbine Co., the Supreme Court allowed a patent owner to sue for an injunction against a United States government contractor under the Court's interpretation of the Act of 1910. This was an important decision for a number of reasons. First, the grant of an injunction was a remedy never before granted to an aggrieved patent owner against a government contractor. Second, the

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18 Crozier v. Fried. Krupp Aktiengesell-schaft, 224 U.S. 290, 304 (U.S. 1912) (“Prior to the passage of the Act of June 25, 1910, 36 Stat. 851, c. 423, a patentee, whose patent was infringed by an officer of the United States, could not sue the United States unless a contract to pay was implied”).


21 246 U.S. 28 (1918).

22 Id. at 44 (In [Crozier] it was decided that there was no right to an injunction).
injunction against the contractor operated as an injunction against the United States government because it prevented the government from obtaining the goods it had contracted to receive.  

The United States military became worried that they might not get the supplies it desperately needed during the First World War because of court-ordered injunctions against its contractors. The military was also worried that contractors might fail to deliver the goods because of the fear of legal action. Therefore, Congress quickly amended the Act of 1910 with the Naval Appropriations Act of 1918. This act removed patent-infringement liability from contractors who were providing supplies for the war and placed liability on the United States, making the government liable for its contractors’ infringement. In 1948, Congress further reduced patent owners’ remedies against contractors by removing liability from any contractor who “used or manufactured [a patent] for the United States.”

In 1960, Congress realized that the current version of 28 U.S.C. 1498(a) had no territorial restrictions and consequently left the United States with more liability than that of an infringing private citizen under 35 U.S.C. 271(a). Therefore, Congress added subsection (c) to 28 U.S.C. 1498 requiring that “[t]he provisions of this section shall not apply to any claim arising in a


24 Id.

25 Id.

26 Id. at 405-406

27 Act of July 1, 1918, ch. 114, 40 Stat. 704, 705 (1918)

28 Act of June 35, 1498, ch. 646 § 1498, 62 Stat. 940, 941-42 (This is now embodied in 28 U.S.C. § 1498(a) (2000)).

29 Zoltek Corp. v. U.S., 51 Fed.Cl. 829, 835 (Fed.Cl. 2002); 35 U.S.C. 271(a) (1953) (providing that the infringement must occur “within the United States.”)
foreign country.” Once again, the government and private citizens were equally liable for infringement.

It did not take very long for infringers to find loopholes in the Patent Act. One such loophole was to practice all the steps of a process patent in the United States except one, which the infringer would practice outside the United States. As the court in *Eli Lilly & Co. v. American Cyanamid Co.* noted, “a patentee holding a process patent could sue for infringement if others used the process in this country, but had no cause of action if such persons used the patented process abroad to manufacture products, and then imported, used, or sold the products in this country.” The court in *NTP, Inc. v. Research in Motion, Ltd.* held “that a process cannot be used ‘within’ the United States as required by section 271(a) unless each of the steps is performed within this country.” Therefore, if any step of a multi-step process patent was not completed in the United States, the owner of the patent would not have a cause of action against the otherwise infringing user.

In response to these loopholes, Congress added subsection (g) to the Patent Act. “Whoever without authority imports into the United States or offers to sell, sells, or uses within the United States a product which is made by a process patented in the United States shall be liable as an infringer . . . .” The amendment only applied to the Patent Act and not Title 28.

In response to these loopholes, Congress added subsection (g) to the Patent Act. “Whoever without authority imports into the United States or offers to sell, sells, or uses within the United States a product which is made by a process patented in the United States shall be liable as an infringer . . . .” The amendment only applied to the Patent Act and not Title 28. Therefore, after the enactment of this amendment, there was once again a gap between the

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32 *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1318 (Fed. Cir. 2005).
33 *Id.*
amount of liability for infringement by the government that by private citizen, but this time the
government was less liable. 36

C. **How the Case Law of the Government’s Waiver of Sovereign Immunity Has Evolved**

To understand how the Judges in Zoltek arrived at their conclusions, it is necessary to understand how the case law has evolved up to this point. If, like France, Russia, Canada and the United Kingdom, the United States Government’s liability for patent infringement arose in the Patent Act, Zoltek would have been an easier decision. The Federal Circuit would have simply applied patent law as refined by case law. However, the government’s waiver of sovereign immunity is not located in the Patent Act and therefore, the court should apply 28 U.S.C. 1498, as refined through case law. As is discussed later in this article, the court in Zoltek picked and chose parts of each area of law to apply to the case without any rhyme or reason. The court’s decision in Zoltek has left uncertainty in the field that needs clarification.

First, part II.C.i explains the development of patent infringement liability in the United States. This is an important area of law because the different opinions in Zoltek disagree whether to apply case law from the inception of the government’s liability or modern interpretations. Then, part II.C.ii discusses how the Court of Claims and the Court of Appeals for the Federal Circuit have developed their standards for when a claim arises in a foreign country. That standard plays a role in each Zoltek opinion because each judge must determine whether to apply case law from patent cases or cases brought under 28 U.S.C. 1498.

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i. The Beginning of the United States Government’s Patent Infringement Liability

Before 1855, when an aggrieved patent owner wanted to bring an infringement claim against the United States, the owner had to submit a bill to Congress. As inventors submitting bills overburdened Congress, they realized that a new solution was necessary. As an answer to this problem, Congress passed the Court of Claims Act of 1855. This act created the Court of Claims and allowed the court to hear "all claims founded upon any law of Congress or upon any regulation of an executive department, or upon any contract, expressed or implied, with the government of the United States." Because the Court of Claims’ jurisdiction did not include Constitutional claims, required to sue the government for taking your patent, or tort claims, required to bring an infringement claim, aggrieved patent owners had to bring infringement claims against the government as breach of an implied contract claims.

In 1887, Congress passed the Tucker Act. The Tucker Act increased the courts jurisdiction to include claims "founded upon the Constitution of the United States." As inventors would soon realize, the court would not interpret this enlarged jurisdiction to include governmental patent infringement. In Schillinger v. U.S., the plaintiff sought to recover for a

38 Id.
40 Id. at § 1.
43 Id. at § 1.
government subcontractor’s use of his patent to improve concrete paving. Schillinger alleged that the government hired a subcontractor to perform stonework and that the subcontractor’s work used Schillinger’s patent. The Supreme Court affirmed the Court of Claims’ dismissal of the suit because the parties never formed a contract and alternatively, the case sounded in tort, which the Court of Claims did not have jurisdiction to hear. In its opinion, the Supreme Court stressed that the Court of Claims has never had jurisdiction to hear takings claims:

While the language of the act of 1887 is broader than that of 1855, it is equally clear in withholding such jurisdiction. It added, 'all claims founded upon the constitution of the United States,' but that does not include claims founded upon torts, any more than 'all claims founded upon any law of congress,' found in the prior act.

This was one of the first interpretations of the Tucker Act. As Richard Seamon noted, “[a]t this time, the Court did not construe the Just Compensation Clause as creating a cause of action except when the circumstances of the taking implied a promise by the government to pay just compensation.”

As mentioned above, Congress then enacted the Act of 1910 allowing an aggrieved patent owner who did not have a contract to bring an action against the government for the tort of patent infringement in the Court of Claims. In one of the first cases brought after the passage of

45 Id.
46 Id. at 165.
47 Id. at 165.
48 Id. at 166-68.
50 Supra Part I.B.
the Act of 1910, the Supreme Court reversed the Court of Appeal’s prior holding that because no contract existed the patent owner had no cause of action.\(^{51}\) *Crozier v. Fried. Krupp Aktiengesellschaft* involved a patentee seeking recovery against the United States government because of the government’s unauthorized use of his patent regarding gun carriages.\(^{52}\) As in prior cases, the Court of Appeals found that Krupp had no cause of action because there was no contract.\(^{53}\) The Supreme Court found that, although the Court of Appeals was correct at the time of the ruling, the new Act of 1910 allowed Krupp to bring a new claim based on patent infringement.\(^{54}\) The Supreme Court dismissed Krupp’s suit without prejudice so he could amend his complaint according to the Act of 1910.\(^{55}\)


As mentioned previously, Congress reduced the territorial application of section 1498 by adding subsection (c) in 1960.\(^{56}\) One of the first cases to decide when a patent infringement claim arose in a foreign country, as required by section 1498(c), was *Decca Ltd. v. U.S.*\(^{57}\) In *Decca*, the patent owner sued the government for using his three-frequency radio navigation system.\(^{58}\) The government argued that because one of the three radio towers required to use the


\(^{52}\) *Id.* at 297.

\(^{53}\) *Id.*

\(^{54}\) *Id.* at 309.

\(^{55}\) *Id.*

\(^{56}\) *Supra* Part I.B.

\(^{57}\) Decca Ltd. v. U. S., 544 F.2d 1070 (Ct.Cl.,1976).

\(^{58}\) *Id.* at 1075.
system was located in Norway, the claim arose in a foreign country. The Court of Claims held that the Government infringed the patent even though one tower was located outside the United States. In reaching its decision, the court held:

This conclusion does not rest on any one factor but on the combination of circumstances here present, with particular emphasis on the ownership of the equipment by the United States, the control of the equipment from the United States and on the actual beneficial use of the system within the United States. . . . Here it has planted several of its feet, and use of United States territory is indispensable to it. The location of facilities in some foreign countries is also essential to the plan, but the selection of any single other country is, apparently, not essential. Any one such country could readily be abandoned for another.

This was the beginning of the planted feet doctrine.

The next case to incorporate the planted feet doctrine was Hughes Aircraft v. U.S. The United States used Hughes’ patent in the construction of a spacecraft in a cooperative agreement with the United Kingdom. The Court of Claims held that in this case “the nexus with the physical territory of the United States . . . [was] insufficient to establish liability” because the spacecraft launched off the coast of Africa and the United Kingdom was responsible for controlling it. However, the court found that “[i]f the United States government had actually

59 Id. at 1082.
60 Id. at 1083.
61 Id. (emphasis added).
63 Id. at 243.
64 Id. at 242.
originated the commands within the United States and then transmitted those commands . . . we would find ‘use’ within the United States.” 65

Unlike the planted feet doctrine, patent law has used a different, bright-line approach to determine when a claim arises in a foreign country. 66 In NTP, the patent owner sued the defendant for using his patented method of allowing mobile users to receive e-mail on a wireless network. 67 The Court of Appeals for the Federal Circuit held “that a process cannot be used ‘within’ the United States as required by section 271(a) unless each of the steps is performed within this country.” 68 By inference, if someone practices any step outside the United States, the process is not used ‘within’ the United States, and therefore, the patent is not infringed.

D. How the United States’ Patent Act Differ s From the Patent Laws of Other Countries

The United States is not the only country to have a provision for determining the government’s right to use patents. Many other countries including, Russia and Canada, have similar provisions. Compared to the provisions of other countries, section 1498 gives the United States government a great deal of latitude, with few procedural safeguards for the patent-holder. 69

65 Id.

66 NTP, Inc. v. Research In Motion, Ltd., 418 F.3d 1282 (Fed. Cir. 2005).

67 Id. at 1287.

68 Id. at 1318.

69 For more detailed comparison of 28 U.S.C. to the provisions of other countries see LiLan Ren, Comment: A Comparison of 28 U.S.C. §1498(A) and Foreign Statutes and An Analysis of § 1498(A)’s Compliance with TRIPS, 41 Hous. L. Rev. 1659 (2005).
The first major distinction between section 1498 and the provisions of other countries is that section 1498 is not located under the Patent Act. This allows courts to avoid using patent laws to interpret section 1498. In contrast, France, Russia, Canada, and the United Kingdom, use patent law to determine whether the government has used a patent. This automatically makes the government and a private actor equally liable because the court is holding them to the same law. Locating the government’s patent liability under the Patent Act also eliminates any confusion about how to interpret the waiver of sovereign immunity.

A second important distinction is that section 1498 is a waiver of the sovereign immunity with few procedural requirements. Russia, France, Canada, and the UK have statutes with more a more procedural focus. This means that unlike the United States, which can just take a patent at any time for any reason, Russia, France, Canada, and the United Kingdom must follow certain procedural steps that safeguard patent owners. For instance, Canada’s patent statute requires its government to try to negotiate with the patent holder first. Then, if “efforts have not been successful within a reasonable period,” the commissioner can authorize the use of a patented invention. Even then, the commissioner must limit the terms to coincide with the principles laid out in the Patent Act and notify the owner of the affected patent. The United Kingdom and

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70 Id. at 1670.

71 Id. at 1671.

72 Id.


74 19.1(1)(b).

75 19(2).

76 19(3).
Russian Patent Acts also require notice to the patent owner.\textsuperscript{77} Conversely, section 1498 has no procedure the government must follow and does not even require that the government notify the patent owner.\textsuperscript{78}

Third, the scope of protection under section 1498 is broader in terms of who is protected by it and when it can be exercised. Section 1498 states that “a contractor, a subcontractor, or any person, firm, or corporation for the Government with the authorization or consent of the Government” can receive protection under the provision.\textsuperscript{79} The United Kingdom’s Patent Act offers more limited protection, requiring “[authorization] in writing by a government department” before protection is granted.\textsuperscript{80} The United Kingdom also limits application of its statute to use for “services of the crown.”\textsuperscript{81} The United Kingdom’s Patent Act goes on to define services of the crown to mean foreign defense, production of drugs or medication, or the production or research of atomic energy.\textsuperscript{82} Russia also has similar limitations as to what circumstances allows the government to use a patent.\textsuperscript{83} Section 1498 has no such limitations and essentially allows the government to use any patent for any reason.\textsuperscript{84}

Finally, the compensation available under section 1498 and international patent acts are drastically different. Section 1498 only requires “reasonable and entire compensation” to be


\textsuperscript{78} 28 US.C. 1498 (2000).

\textsuperscript{79} 28 US.C. 1498(a) (2000).

\textsuperscript{80} 55(1).

\textsuperscript{81} Id.

\textsuperscript{82} 56(2).

\textsuperscript{83} Article 11.

determined by the court.\textsuperscript{85} In contrast, Canada requires the government to try to negotiate an agreement before going to court.\textsuperscript{86} If that does not work, Canada has the commissioner determine the amount of compensation.\textsuperscript{87} This is beneficial because the commissioner is familiar with patents and is in the best position to make fair judgments about compensation for the parties, unlike a circuit court judge who may have never heard a patent case before. The United Kingdom also requires the government to attempt negotiation before going to court. Although the United Kingdom does not have an arbitrator like the one provided for by Canadian law, its Patents Act does require “compensation for loss of profit.”\textsuperscript{88} There is no comparable provision under section 1498 and therefore, patent owners receive less than reasonable compensation.\textsuperscript{89}

\textbf{III. \textit{Zoltek v. US}: A Look at What Happened}

To begin the critique, parts A and B will detail the facts and the holding of the trial court. Then, part C will explain the opinions of the majority, both concurrences, and the dissent. This case is unique because both of the majority judges in \textit{Zoltek} wrote their own opinion as to how to reach the holding of the case. This leaves patent law in regards to the government’s liability for infringement unclear.

\textbf{A. The Facts Behind \textit{Zoltek v. U.S.}}

United States Reissue Patent No. 34,162 (the ‘162 patent) claims a “method of manufacturing controlled surface electrical resistance carbon fiber sheet products.”\textsuperscript{90} The method

\begin{footnotes}
\footnote{86} 19.1(1)(a); 57(7).
\footnote{87} 19(2).
\footnote{88} 57(A).
\footnote{90} US PAT RE34162
\end{footnotes}
requires partially carbonizing a fiber-starting material until one receives a desired specific
surface resistance.\textsuperscript{91} The next step of the process involves weaving or processing the partially
carbonized fibers into fiber mats or sheets.\textsuperscript{92} Zoltek Corporation (Zoltek) is the assignee of the
‘162 patent.\textsuperscript{93}

Lockheed Martin Cooperation (Lockheed) subcontracted the manufacture of two silicide
fiber products to construct F-22 fighters for the United States military.\textsuperscript{94} The first product made
was from Nicalon silicon carbide fibers, while the second product made was from Tyranno
fibers.\textsuperscript{95} Although the subcontractor manufactured and processed the Nicalon fibers into mats in
Japan, it made the Tyranno fibers into mats in the United States.\textsuperscript{96} Lockheed used both mats
when manufacturing the F-22 fighters in the United States.\textsuperscript{97}

Zoltek then initiated suit in the Court of Federal Claims.\textsuperscript{98} Zoltek alleged that Lockheed
and the United States used the ‘162 patent when they had sheets and mats manufactured using
the claimed methods of the patent.\textsuperscript{99} The government moved for a partial summary judgment,
arguing that because they used the process patent in Japan, 28 U.S.C. 1498(c) barred Zoltek’s
claim because it arose “in a foreign country.”\textsuperscript{100}

\textsuperscript{91} Id.
\textsuperscript{92} Id.
\textsuperscript{93} Id.
\textsuperscript{94} Zoltek Corp. v. U.S., 51 Fed.Cl. 829, 831 (Fed.Cl. 2002).
\textsuperscript{95} Id.
\textsuperscript{96} Id.
\textsuperscript{97} Id.
\textsuperscript{98} Id.
\textsuperscript{99} Id.
\textsuperscript{100} Id.
B. The Trial Court’s Holding

The trial court ultimately agreed with the United States that section 1498(c) prevented Zoltek’s claim under section 1498(a), but found that Zoltek had a separate “claim outside of section 1498 for a taking of its patent rights under the Fifth Amendment.” Therefore, the trial court directed Zoltek to amend its complaint to include a takings claim and denied the United States’ motion for summary judgment. The United States appealed the dismissal of its motion for summary judgment and Zoltek appealed the trial court’s determination that section 1498(c) barred it from bringing a 1498(a) claim. Zoltek also amended its complaint to include a Fifth Amendment takings claim consistent with the trial court’s direction.

C. The Opinions from Zoltek v. U.S.

Now that this article has addressed the legislative history and judicial interpretation of both sections 1498 and 271, this article will now summarize each of the judges’ arguments. Part III.C.i explains the majority opinion. Then, parts ii and iii present both of the concurring opinions, written by Circuit Judge Gajarsa and Circuit Judge Dyk. Part iv concludes with Circuit Judge Plager’s dissent. It is important to understand each of the three judges’ opinions because each opinion presents a very different view on how to decide the case. Each opinion also gives insight to the other opinions’ strengths and weaknesses.

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102 Id. at 707.
103 Id.
104 Zoltek Corp. v. U.S., 442 F.3d 1345 (Fed. Cir. 2006).
i. The Majority Opinion

The majority started breaking down the case into two separate questions. First, was the government liable for patent infringement under 28 U.S.C. 1498, if the patent user practiced one or more steps outside the United States? Second, could a patent owner bring a takings claim against the government under the Fifth Amendment? The majority answered both questions in the negative.

Under the majority’s section 1498 analysis, the majority explained that the federal government is only liable where it has waived its sovereign immunity. Therefore, an aggrieved patent owner must bring a claim against the federal government under 28 U.S.C. 1498. The majority went on to require “direct infringement” as defined by 35 U.S.C. 271(a) for any liability to accrue under section 1498. In turn, direct infringement under section 271(a) requires use within the United States. The court held that a use is not within the United States unless every step of the patented process occurs within the United States. Because the federal government practiced at least one step outside the United States, the government did not use the invention.

105 Id. at 1349.
106 Id.
107 Id.
108 Id.
109 Id. at 1349
110 Zoltek Corp. v. U.S., 442 F.3d 1345, 1350 (Fed. Cir. 2006).
111 Id.
112 Id.
113 Id.
within the United States as required by section 271(a), and therefore, section 1498 was not applicable to this case.\footnote{Id.}\footnote{\textit{Id.}}

The court then continued to the second question presented, the takings claim.\footnote{\textit{Id.}} The majority reversed the trial court’s determination that the government’s use of Zoltek’s patent was a Fifth Amendment takings claim that Zoltek could bring under the Tucker Act.\footnote{\textit{Id.}} The opinion started by restating the holding of \textit{Schillinger} that “a patentee [could not] sue the government for patent infringement as a Fifth Amendment taking under the Tucker Act.”\footnote{\textit{Id.}} Although the trial court determined that \textit{Crozier} overturned \textit{Schillinger}, the majority found that “\textit{Schillinger} remains the law today.”\footnote{\textit{Id.}} at 1350-1351.

The court went on to hold that 28 U.S.C. 1498 was a patent holder’s sole remedy for governmental infringement.\footnote{Zoltek Corp. v. U.S., 442 F.3d 1345, 1352 (Fed. Cir. 2006).} The court stated that “[i]n response to \textit{Schillinger}, Congress provided a specific sovereign immunity waiver for a patentee to recover for infringement by the government.”\footnote{\textit{Id.}} The majority reasoned that if the Fifth Amendment allowed infringement claims, there would be no need to create the Act of 1910.\footnote{\textsuperscript{121} Supra Part II.B. (The Act of 1910 was the first enactment of what is now 28 U.S.C. 1498); \textit{Zoltek}, 442 F.3d at 1352.} Therefore, the court found that Zoltek did not have a cause of action because the government did not use the patent within the
United States as required by 28 U.S.C 1498 to find infringement and the Fifth Amendment does not permit taking claims for patents. 122

ii. Circuit Judge Gajarsa’s Concurrence

Although Judge Gajarsa concluded that the majority reached the correct holding, he found that the majority should not have based its conclusions on erroneous case law. 123 Unlike the majority, Gajarsa concluded that 35 U.S.C. 271 and 28 U.S.C. 1498 are parallel but separate codes. 124 In addition, Gajarsa found that neither the Fifth Amendment nor anything else in the Constitution required the existence of section 1498 and therefore, the government does not have to provide any specific relief to patent owners. 125

Gajarsa disagreed with the majority’s reliance on NTP because it relied on sloppy opinion writing. 126 He traced the problem back to an early section 1498 case, Decca Ltd. v. U.S. 127 Decca involved a patent owner who sued the United States for allegedly infringing the owner’s patent for a three-frequency radio navigation system. 128 The court in Decca explained that section 1498 requires direct infringement, meaning that inducing and contributory infringement “do not give rise to government liability because the Government has not waived its sovereign immunity with respect to such activities.” 129 Decca never mentioned 35 U.S.C. 271. 130

123 Id. at 1353.
124 Id. at 1354.
125 Id. at 1366.
126 Id. at 1353.
127 Decca Ltd. v. U. S., 640 F.2d 1156 (Ct.Cl. 1980).
128 Id.
129 Id. at 1167.
130 Zoltek Corp. v. U.S., 442 F.3d 1345, 1354 (Fed. Cir. 2006).
Four years later, the Court revisited *Decca* to support the proposition that “concepts, phrases, and words . . . under Title 35 . . . do not and cannot always connote or denote the same meaning under section 1498.” 131 However, the footnote supporting this contention cited to *Decca*, stating that “the Government can only be sued for any direct infringement of a patent (35 U.S.C. §271(a)), and not for inducing infringement by another section (section 271(b)) or for contributory infringement (section 271(c)).” 132 Instead of just using the general term “direct infringement,” the court equated direct infringement under section 1498(a) to that under section 271(a). 133 This slip of the pen did not pose immediate problems because it was mere dicta, hidden away in a footnote until it became binding precedent twenty years later. 134

In 2005, the court heard “the BlackBerry case,” where a patent owner sued a competitor for using a method of allowing mobile users to receive email wirelessly. 135 The court needed to decide whether “using, offering to sell, or selling of a patented invention is an infringement under section 271(a) if a component or step of the patented invention is located or performed abroad.” 136 The court cited to *Decca* to determine this question because it believed that “section 271(a) is a necessary predicate for government liability under section 1498.” 137 In this way, what was only dicta in *Motorola* became precedent in *NTP*.

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132 *Id.* at note 3.
133 *Zoltek*, 442 F.3d at 1354.
135 *NTP*, 418 F.3d 1282.
136 *Id.* at 1315.
137 *Id.* at 1316.
However, Judge Gajarsa wrote that the court’s conclusion does not have to rest on this “unchecked propagation of error in . . . case law.” 138 Gajarsa determined that section 1498 is not a waiver of sovereign immunity to an old remedy, but is “a new remedy . . . [that] inherently created new rights.” 139 Therefore, this new remedy does not have to rely on any other codes, such as patent law, for authority. 140 Judge Gajarsa turned patent law to interpret the meaning of ‘use’ as “requir[ing the] practice of every step claimed in the method” because no definition is offered in section 1498(a). 141 Gajarsa also interpreted “arise in a foreign country,” under section 1498(c), to mean when any step of a process patent is practiced outside the United States. 142 In so holding, Gajarsa distinguished the holding in Decca that use occurs where utility of the patent is extracted, because Decca involved a patented device, while Zoltek involved a patented process. 143 He justified this distinction stating, “[w]hereas utility can be extracted from a device only after it has been ‘made,’ utility is extracted from a process” while the process is being carried out. 144 Gajarsa went on to say that if the holding in Decca was applied to process patents used by government contractors, use of a patented process would always be traceable back to the United States and would therefore, read subsection (c) out of existence. 145

139 Id. at 1357.
140 Id.
141 Id. at 1359.
142 Id. at 1366.
143 Id.
144 Zoltek Corp. v. U.S., 442 F.3d 1345, 1365 (Fed. Cir. 2006).
145 Id. at 1366.
Finally, Gajarsa found that there is no Fifth Amendment taking claim. In fact, Gajarsa concluded that the “Constitution does not require Congress to create remedies in the courts at all” and that without section 1498 aggrieved patent owners could seek compensation through legislative action as they did before the Act of 1910. Because section 1498 complies with the requirements for the Takings Clause, it is constitutional and sufficient.

iii. Circuit Judge Dyk’s Concurrence

Judge Dyk on the other hand, wrote his concurrence to reinforce the majority’s holding. Dyk stated that the “government can only be liable for infringement under section 1498(a) if the same conduct would render a private actor liable for infringement under section 271(a).” Therefore, the majority’s reliance on NTP is correct.

Dyk found that the purpose of section 1498(a) was to make the government liable for direct infringement to the same degree as a private actor would have been under the Patent Act. Because section 1498 does not mention the rights of a patent owner or the definition of infringement as section 271(a) does, the drafters must have solely intended it to provide a remedy against the government by waiving sovereign immunity to section 271(a).

146 Id. at 1367.
147 Id.
148 Id.
149 Id.
150 Zoltek Corp. v. U.S., 442 F.3d 1345, 1368 (Fed. Cir. 2006).
151 Id. at 1367.
152 Id. at 1368.
153 Id.
In regards to the Fifth Amendment takings claim, Judge Dyk found there is no basis for a Fifth Amendment claim.\textsuperscript{154} Dyk reached this conclusion because section 1498 gives an aggrieved patent owner the same rights against the United States government as it does against a private actor.\textsuperscript{155} Therefore, no one has taken anything from the patent owner.\textsuperscript{156}

In applying his conclusions, Dyk found that the United States did not use the ‘162 patent within the United States, as required by section 271(a).\textsuperscript{157} Therefore, the United States did not infringe the patent.\textsuperscript{158}

\textbf{iv. Circuit Judge Plager’s Dissent}

Like the majority does with its opinion, Judge Plager wrote his dissent answering two main questions.\textsuperscript{159} First, “may an owner of a United States patent bring a cause of action under the Fifth Amendment to the Constitution against the United States for a 'taking' as all other owners of property rights may; or is a patent right somehow less of a property interest, not worthy of such constitutional protection?”\textsuperscript{160} Second, “does the fact that some or all of the steps are performed in a foreign country preclude recovery” under section 28 U.S.C. 1498?\textsuperscript{161} Plager found that Zoltek “has stated a cause of action under section 1498 which relief could be granted”\textsuperscript{162} and that the takings claim was an issue “wholly independent of . . . § 1498.”\textsuperscript{163}

\begin{flushright}
\textsuperscript{154} Id.
\textsuperscript{155} Id.
\textsuperscript{156} Id.
\textsuperscript{157} Id. at 1370.
\textsuperscript{158} Id.
\textsuperscript{159} Supra at Part III.C.i.
\textsuperscript{160} Zoltek Corp. v. U.S., 442 F.3d 1345, 1370-71 (Fed. Cir. 2006).
\textsuperscript{161} Id. at 1371.
\textsuperscript{162} Id. at 1378.
\end{flushright}
Plager started his discussion of the Fifth Amendment issue by restating that the Amendment protects against “private property be[ing] taken for public use, without just compensation.” 164 He also reminded the readers that this does not prevent the government from taking private property; it just requires that when the government does so, it must justly compensate the former owner. 165 Because the patent act declares that “patents shall have the attributes of personal property,” 166 Plager concluded that this is a taking, which required just compensation. 167

Unlike the majority, which “equates the takings claim with an infringement claim,” 168 Plager found that “these are two separate legal claims founded on separate legal bases.” 169 Plager agreed with Gajarsa that the tort of patent infringement, like that of section 1498, is statutorily based and “exists at the discretion of Congress.” 170 However, “the right to just compensation for a taking is constitutional, and requires no legislative blessing.” 171

The dissent also disputed the majority’s characterization of Schillinger. 172 According to Plager, Schillinger was not a taking case at all. 173 The plaintiff in Schillinger brought a claim

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163 Id. at 1385.
164 Id. at 1373.
165 Id.
166 Id. at 1374.
167 Id.
168 Supra at Part III.C.i.
170 Supra at Part III.C.i.; Zoltek, 442 F.3d at 1375.
171 Zoltek, 442 F.3d at 1375.
172 Id.
173 Id.
against the government for the tort of infringement, not a takings claim.\textsuperscript{174} Therefore, the
majority’s reliance upon \textit{Schillinger} to show the Tucker Act cannot support a takings claim is
unsound. It was only in the dissent that the case discussed a takings issue at all.\textsuperscript{175} In dissent,
Judge Harlan found that “[i]f the claim here made to be compensated for the use of a patented
invention is not founded upon the constitution of the United States, it would be difficult to
imagine one that would be of that character.”\textsuperscript{176} Plager argued that even if the majority is correct
in holding that \textit{Schillinger}’s discussion of the Tucker Act could be read to deny a takings claim
for a patent, it would be unwise to rely solely on a case decided when the Tucker Act was new
and still evolving.\textsuperscript{177} Since then, the Supreme Court, in deciding that a statutory remedy did not
bind a plaintiff whose property had been flooded, held that:

> The form of the remedy did not qualify the right. It rested upon the Fifth
> Amendment. Statutory recognition was not necessary. A promise to pay was not
> necessary. Such a promise was implied because of the duty to pay imposed by the
> amendment. The suits were thus founded upon the Constitution of the United
> States.\textsuperscript{178}

Plager noted that in 1987 the Supreme Court again held that “a cause of action under the Fifth
Amendment’s takings clause is understood to be neither a tort claim nor a contract claim, but a

\begin{itemize}
\item\textsuperscript{174} \textit{Schillinger v. U.S.}, 155 U.S. 163, 15 S.Ct. 85 (1894).
\item\textsuperscript{175} \textit{Id.} at 173 (Harlan’s Dissent).
\item\textsuperscript{176} \textit{Id.} at 91.
\item\textsuperscript{177} \textit{Zoltek Corp. v. U.S.}, 442 F.3d 1345, 1376 (Fed. Cir. 2006).
\item\textsuperscript{178} \textit{Jacobs v. U.S.}, 290 U.S. 13, 16, 54 S.Ct. 26, 27 (1933).
\end{itemize}
separate cause of action arising out of the self-executing language of the Fifth Amendment.”\footnote{179}

Therefore, the Tucker Act has evolved to allow patent takings claims.\footnote{180}

Plager acknowledged that the first case that dealt with the Act of 1910, now section 1498, did in fact hold that its purpose was to fulfill the Government’s obligations of the Fifth Amendment and not to waive sovereign immunity to the tort of patent infringement.\footnote{181} However, Plager wrote that a straightforward reading of the Act should have indicated to the court that it was “a waiver of the Government’s sovereign immunity from the tort of patent infringement.”\footnote{182} Plager ultimately concluded that the majority’s holding, barring a section 1498 claim because any step of a multi-step process occurred outside the United States, does not comply with the Constitutional requirement that the Government provide just compensation for a taking and therefore does not satisfy the Fifth Amendment.\footnote{183}

The dissent then moved on to the second issue at hand, the section 1498 infringement issue.\footnote{184} Plager found that the majority’s interpretation of section 1498 is not only wrong but has dangerous constitutional implications as well.\footnote{185} Plager concluded that “unless all steps of the method are practiced abroad,” the use is infringing.\footnote{186}

\footnote{180} Zoltek, 442 F.3d at 1377.
\footnote{181} Id. at 1383.
\footnote{182} Id.
\footnote{183} Zoltek Corp. v. U.S., 442 F.3d 1345, 1384 (Fed. Cir. 2006).
\footnote{184} Id. at 1378.
\footnote{185} Id.
\footnote{186} Id. at 1382.
First, reading section 271(a) into section 1498(a) is improper.\textsuperscript{187} Plager agreed with Gajarsa that section 271(a) and 1498(a) are two distinct bodies of law.\textsuperscript{188} Section 1498 never references or links to 271(a).\textsuperscript{189} To read section 271(a) into 1498(a) would be to read of out existence subsection (c).\textsuperscript{190} 35 U.S.C. 271(a) requires that the infringement be “within the United States.”\textsuperscript{191} If section 1498(a) carried a territorial limitation via reading section 271(a) into 1498(a), then 1498(c) would be redundant and unnecessary.\textsuperscript{192}

Plager also agreed with Gajarsa that only erroneous case law suggested that courts should read section 271(a) and 1498(a) together.\textsuperscript{193} However, Plager argued that because NTP relied on Title 35 and not Title 28, and because the United States was not a party to the suit, the mistaken statement of the relation of the two sections was not the holding of the case and is not binding precedent.\textsuperscript{194}

Plager argued that Zoltek’s claim is allowable because section 1498(a) has no territorial limitation; therefore, the court must look at subsection (c) to determine if Zoltek’s claim is barred.\textsuperscript{195} Plager concluded that logic dictates that “[a] cause of action does not ‘arise’ in a place just because one step of a multi-step process patent occurs there.”\textsuperscript{196} He explained that “[t]he

\textsuperscript{187} Id. at 1379.

\textsuperscript{188} Supra at Part III.C.i.i.

\textsuperscript{189} Zoltek, 442 F.3d at 1379.

\textsuperscript{190} Id.

\textsuperscript{191} 35 U.S.C. § 271(a).

\textsuperscript{192} Zoltek Corp. v. U.S., 442 F.3d 1345, 1379 (Fed. Cir. 2006).

\textsuperscript{193} Zoltek, 442 F.3d at 1379-80.

\textsuperscript{194} Id.

\textsuperscript{195} Id. at 1381.

\textsuperscript{196} Id. at 1382.
basic policy underlying § 1498 is that when the Government has allegedly benefited . . . and
when fairness decrees that the Government be held responsible for its wrongs . . . then the fact
that one or another step of a process occurred outside the United States should not alone
immunize the Government from liability.”
Therefore, Plager found that the government is liable under section 1498.

IV. The Criticism of the Majority and Concurring Opinions

This portion of the article analyzes and weighs the majority opinion and both majority
judges’ concurring opinions. Part A will explore the pitfalls of the majority opinion. Parts B and
C will examine Judge Gajarsa’s and Dyk’s concurring opinions.

A. Majority: The Short Opinion of What the Two Judges Agree Upon

The brevity of the majority opinion evidences the inability of the majority judges to agree
on how to reach the majority holding. The fact that after the seven pages of the majority’s
opinion, eighteen pages of concurrences follow further illustrates the majority judges inability to
agree. This portion of the article evaluates the majority’s opinion. Part i discusses the majority’s
holding regarding 28 U.S.C. 1498, and part ii discusses the takings holding.

i. The Majority Finds no Liability under 28 U.S.C. 1498(a)

To begin, the majority concluded that 28 U.S.C. 1498(a) is the sole relief against the
government for patent infringement. However, as Judge Plager noted, section 1498(a) does
not mention infringement. Infringement is a legal term that has unique meaning in patent law.

197 Id.
198 Id.
200 Id. at 1372-73.
Had the drafters of section 1498 wanted to impute that legal meaning into the section, they could have easily done so by writing it in or by simply waiving the government’s immunity to 35 U.S.C. 271(a); however they did not. Instead, section 1498 reads, “used or manufactured.” Therefore, infringement under patent law cannot influence what is actionable under section 1498.

If the drafters had either waived sovereign immunity to section 271 or included sovereign immunity in the Patent Act as France, Russia, Canada and the United Kingdom have done, there would be no argument as how or whether to apply infringement to the government. The court would simply have to apply the laws from the Patent Act. Because the waiver is not in the Patent Act, there is ambiguity, which the majority put in further doubt by their decision in Zoltek.

Furthermore, as Judge Gajarsa discussed, the majority’s incorporation of section 271(a) into section 1498 is an erroneous leap based on unsound case law. The majority relied on the assertion found in NTP, which required direct infringement as defined by section 271(a) for section 1498(a). NTP supported this contention by citing to part of the Motorola opinion, which inadvertently mischaracterized Decca. The court should have stopped this mischaracterization at this point.

All three judges deciding this case agree that NTP is not based upon sound case law. Judge Gajarsa and Plager outright criticize it and Judge Dyk found that, although the holding was correct, it was the legislative history and not the case law precedent that made the reading of

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203 Zoltek, 442 F.3d at 1353.
204 Id. at 1350.
205 Supra at Part III.C.ii.
206 Zoltek Corp. v. U.S., 442 F.3d 1345, 1372 (Fed. Cir. 2006).
section 271(a) into section 1498(a) correct.\textsuperscript{207} Why direct infringement is required to show that the United States or its contractors “used or manufactured” an owner’s invention no one ever explained.

Additionally, because section 1498(a) is not a waiver of immunity to section 271(a)\textsuperscript{208} claims and makes no explicit reference to section 271(a),\textsuperscript{209} the operative words in section 1498(a) should have meaning independent of 271(a). Direct infringement as required by 271(a) is not required in section 1498(a). Neither is the definition of ‘use’ as required by section 1498(a) necessarily the same as that required to constitute infringement under section 271(a). Likewise, the analysis used to determine when a use is “within the United States” should not be used to determine when a “claim arises in a foreign country.” Reading the patent law into section 1498(a) and (c) displaces the carefully selected wording of the statute and instead merely creates a waiver of sovereign immunity to section 271(a) of the patent law.

Instead of looking to patent law to provide judicial meaning to the words of section 1498, as the majority did by looking at \textit{NTP} and \textit{Motorola},\textsuperscript{210} the court should have looked to other 1498 cases like \textit{Decca} and \textit{Hughes} and applied the holding of those cases to the present case. Under the planted feet doctrine of \textit{Decca} and \textit{Hughes}, the factors weigh in favor of finding that the government used Zoltek’s process patent. The government is controlling the manufacture of the carbon fiber sheet product (although not manufacturing it themselves), the government owns the carbon fiber sheet product and is gaining beneficial use of the product in its incorporation

\textsuperscript{207} \textit{Id.} at 1368-70.

\textsuperscript{208} \textit{Supra} at note 112.


\textsuperscript{210} \textit{Id.} at 1350.
into the fighter jets. According to the planted feet doctrine, the government is using Zoltek’s process patent.

ii. The Majority Finds No Takings Can Occur Under the Tucker Act

To find out if the taking of a patent by the government is included under the Tucker Act, the majority went back more than one hundred years to determine the proper interpretation of the Tucker Act.211 In doing so, the majority found that the 1894 Schillinger opinion is still the authority on the subject and that the Tucker Act does not cover patent infringement.212 Reliance on an archaic case over one hundred years old is flawed.

When Schillinger was decided, the Tucker act was only a couple years old.213 The court’s interpretation of the Tucker Act in 1894 is not the same as it is today.214 In 1894, the court had not yet recognized that the Tucker Act could support a Fifth Amendment takings claim, as it does today.215 Using the 1894 interpretation of the Tucker Act today is analogous to using the interpretation of the Fourteenth Amendment in 1870. If this were the case, women and racial minorities, other than African Americans, would have little if any of the rights they have today.

As Judge Plager noted, even if Schillinger is the primary authority on the Tucker Act, Schillinger’s holding was that no jurisdiction existed for “claims against the government for mere torts.”216 Just compensation for the government’s taking of property is not a tort, but a

211 Id.
212 Id.
216 Zoltek, 442 F.3d at 1375.
constitutional right.\textsuperscript{217} Schillinger is more on point as to whether the Tucker Act covers patent infringement, than whether the takings clause is covered. Therefore, the court should not use Schillinger for takings claims.

Even foreign nations such as the United Kingdom and Russia do not give their government complete authority to take any patents it desires. Under the patent system of the United Kingdom, the sovereign can only use a patent for foreign defense, production of drugs or medication, or the production or research of atomic energy. Even then, the government must still try to negotiate an agreement before they use the patent. The United States’ use of Zoltek’s patent would not be legal under the United Kingdom’s or Russia’s patent law. The United States did not even attempt to negotiate a license with Zoltek and the United Kingdom would not define the United States’ use of Zoltek’s patent for foreign defense. The dissimilarity between the United States’ patent law as interpreted by the Court of Appeals for the Federal Circuit in Zoltek and most of the world should indicate that something is wrong with its laws.

\textbf{B. Criticism of Judge Gajarsa’s Concurrence}

Judge Gajarsa erred in his concurrence because he misinterprets section 1498. First, Gajarsa’s use of patent law to interpret section 1498 is incorrect because section 1498 is independent and distinct from the Patent Act. Gajarsa’a use of the Patent Act to interpret section 1498 reads the Patent Act into section 1498 and negates the purpose of having a separate waiver of sovereign immunity. Second, adapting the Planted Feet Doctrine, which is used to interpret when infringement of a device patent has arisen in a foreign country, to process patents is more logical than creating a new model. Finally, the purpose of section 1498 as shown by its legislative history is to place the equivalent amount of liability for infringement on the

\textsuperscript{217} U.S. Const. amend. V.
government as there is on a private actor. Gajarsa ended his concurrence by briefly discussing the takings issue. However, judge Gajarsa did not provide a persuasive explanation as to why there is no relief for an aggrieved patent owner, when the government used the patent outside the United States.

Judge Gajarsa started his concurrence by explaining why the court should not read 35 U.S.C. 271 into 28 U.S.C. 1498. Gajarsa’s first objection was that the court should not propagate the erroneous case law found in *NTP* and *Motorola* any further. Gajarsa’s second objection was that because section 271 and section 1498 are parallel yet distinct laws, the court should not look to section 271 to interpret the coverage or remedies of section 1498. Gajarsa began to error, however, when he argued that the court should not look at patent law to determine the remedies or coverage of section 1498, but that it can look to patent law to interpret when a patent has been ‘used’ or when that use has ‘arisen in a foreign country.’ Use of patent law in these contexts should be consistent; if it is inappropriate to look to patent law in some cases because patent law is distinct from section 1498, then it should always be inappropriate. Again, this would not be an issue if the United States simply put the sovereign’s waiver of immunity in the Patent Act or waived immunity to the Patent Act like most other countries. The mere fact that judges are even having this debate suggest a solution to clarify the issue is required.

Looking to patent law to interpret words and phrases used in section 1498 is erroneous for three reasons. First, interpreting parts of section 1498 by using patent law essentially reads

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218 *Zoltek*, 442 F.3d at 1353-58.

219 *Id.* at 1353.

220 *Id.* at 1354.

221 *Zoltek Corp. v. U.S.*, 442 F.3d 1345, 1359 (Fed. Cir. 2006).
patent law into this section. This requires a finding of liability under section 271 to find liability under section 1498 because the interpretation of section 1498 is the same as section 271. Interpreting section 1498 this way is inconsistent with Gajarsa’s idea that the section 1498 and section 271 are distinct laws and that liability under 271(a) is not required to find liability under 1498(a).222

If the court accepted Judge Gajarsa’s interpretation of section 1498, it would first have to follow the two-step approach found in section 271(a) to see if the claims as construed by the court “read on the accused device.”223 If the claims do, the court would then look to see if the alleged infringer has “used” the patent and if the use “arose in a foreign country.”224 To do this, the court would apply “use” as defined by patent law.225 The court would have to apply every step of the section 1498(a) analysis as if it were proceeding in a section 271(a) case. Under this analysis, section 1498(a) would not be distinct from section 271(a), rather, finding liability under 271(a) would be a precursor to finding liability under section 1498(a).

Second, the court did not need to create a new interpretation because a workable model already existed in Decca and Hughes.226 Contrary to the holdings of the patent cases cited by Gajarsa, Decca and Hughes used the planted feet doctrine to determine when a “use” “arose in a foreign country.”227 Although there is criticism of the planted feet doctrine because it does not

222 Id. at 1354-56.
223 Id. at note 1356; “Literal infringement of a claim exists when each of the claim limitations ‘reads on,’ or in other words is found in, the accused device.” Allen Eng’g Corp. v. Bartell Indus., 299 F.3d 1336, 1345 (Fed.Cir. 2002).
224 Id. at 1359.
225 Id.
227 Decca, 544 F.2d at 1083; Hughes, 29 Fed.Cl. at 242.
analyze the claims as patent law would require, section 1498 never requires infringement as found by section 271 or even mentions infringement at all. Had the drafters of section 1498 wanted to require the same process to find liability, they could have simply waived sovereign immunity to patent law or used terms and defined them according to patent law. However, the drafters did neither. Because section 1498 and section 271 are distinct laws and the planted feet doctrine is a model that the court has used with success, there was no need to borrow interpretations from patent law.

Although Gajarsa accepts the holding of Decca, he declined to extend it from device patents to process patents. Gajarsa reasoned that because the value and utility of a device patent is derived from using the device, the use results where the value is obtained. This differs from a process patent, where the value and utility of the patent come only from actual use of the process. Because use of the process occurs primarily outside the United States, use of the patent itself occurs outside the United States. However, Gajarsa failed to recognize that a process would be of no value to anyone using it, if there were no end product. Therefore, like a device patent, a process patent has value only because the result is useful or valuable. In addition, “[like] use of a system as a whole, in which the components are used collectively,” one must use the steps of a process collectively. If any one step is not performed, the result may not be useful. Therefore, the steps of the ‘162 patent that were performed in the United States to create the Tyranno fiber mats were an integral step of the process, without which, the process

228 Zoltek Corp. v. U.S., 442 F.3d 1345, 1365 (Fed. Cir. 2006).
229 Id.
230 Id.
231 Id.
232 Id.
would have been made the process valueless and useless. For this reason, the court should use the planted feet doctrine to evaluate all section 1498(a) cases.

Third, the result reached in Gajarsa’s concurrence was not equitable. As Gajarsa points out, section 1498 has always strived to be parallel to section 271.233 The drafters of section 1498 first created it to make the government as liable for using a patent as a private actor under section 271(a).234 When the legislature determined that the government was more liable than a private actor because section 1498(a) did not contain a territorial limit, the legislature added subsection (c).235 Now, section 1498 again makes the government less liable for patent infringement than private actors because section 271(g) creates liability for a private actor who uses a United States process patent outside the United States.236 The purpose of section 1498 and its relationship to section 271 in regard to the amount of liability accorded is obvious. Because the court has refused to interpret section 1498 in accordance with its legislative history, the only option is for the legislature to fix the inequitable result obtained in Zoltek by once again creating equal liability for the government and private actors.

Finally, Judge Gajarsa’s brief analysis on the merits of a takings claim was unpersuasive. As mentioned previously, a takings claim is independent of and different from the tort of patent infringement.237 However, even if Judge Gajarsa was correct in his interpretation of section 1498(a), it would only provide relief for aggrieved patent owners where the government used the owner’s patent in the United States. A taking has still occurred in cases where the government

233 Id. at 1360-61.
234 Supra Part II.B.
237 Supra Part III.D.1.2.
has taken a process patent and used it abroad.\footnote{Id. at 1349.} If Judge Gajarsa is correct that section 1498(a) does not provide relief,\footnote{Id. at 1366.} the court should allow a process patent owner to bring a separate takings claim.

**C. Criticism of Judge Dyk’s Concurrence**

Judge Dyk’s concurrence also suffered from three main errors. Dyk wrote that section 1498(a)’s drafters intended it to be a waiver of immunity to section 271(a). This assertion ignored the history and purpose of section 1498 in regards to the development, through numerous amendments, of section 271. Dyk also stated that by interpreting section 1498 to find liability in circumstances such as those in *Zoltek*, the liability for the government would be greater than that of a private actor. This is not true because private actors are liable for all subsections of 271, including subsection (g) which would make a private actor liable under the facts of *Zoltek*. Finally, Dyk erred in his analysis of the takings claim because he interpreted a claim under section 1498 interchangeably with a Fifth Amendment takings claim.

First, Judge Dyk’s interpretation of section 1498(a) as merely a waiver of sovereign immunity to section 271(a) was incorrect. Judge Dyk started his concurrence by reiterating his idea that section 1498(a) required infringement as defined by section 271(a).\footnote{Id. at 1368.} As discussed previously, this was an incorrect interpretation of section 1498(a).\footnote{Supra Part III.D.i.1.} In fact, Judge Dyk was the sole subscriber to this idea. The majority of the judges did not accept that section 1498(a) was a waiver of sovereign immunity to section 271(a).\footnote{Zoltek, 442 F.3d at 1379 (Judge Plager); Zoltek, 442 F.3d at 1355 (Judge Gajarsa).} However, because the majority opinion did
not say why it, Gajarsa and Dyk, concluded that direct infringement was required for section 1498, each judge’s rational must be analyzed. If the drafters merely wanted to waive the government’s immunity to section 271(a), they could easily have done so, but they did not. As Gajarsa pointed out, section 1498 created a “new remedy [with] inherently create[d] new rights.”

Second, the factual basis for this finding, that an alternative interpretation of section 1498 provided greater liability for the government than a private actor, was also erroneous. The basis for Judge Dyk’s finding, as he reiterated in his concurring opinion in the denial of the petition for rehearing en banc, was that “the rights against the United States under section 1498 [should not be] greater than the rights against private parties in a suit for patent infringement [and that] there would be no claim for infringement against a private actor under the circumstances of this case.” Although this may have been correct before the legislature passed the Process Patent Amendment Act of 1988, which added subsection (g) to section 271, it is no longer true today. A historical analysis of sections 1498 and 271 reveals that changes implemented by the Process Patent Amendment Act should also be applied to government liability under section 1498.

Under section 271(g), a private actor is liable if they use a patented process outside the United States and then import the product of that process and use it within the United States. For example, in Ajinomoto Co., Inc. v. Archer-Daniels-Midland Co., the defendant, ADM, used Ajinomoto’s method patent to prepare bacterial strains that produced amino acids. ADM used the method to produce the strains outside the United States and then imported the strains into the

243 Id.

244 Zoltek Corp. v. U.S., 464 F.3d 1335, 1339 (Fed.Cir. 2006).

The court found that ADM’s use of the method patent outside the United States infringed Ajinomoto’s patent and ADM was therefore liable. These facts are similar to those in Zoltek. The United States made the fibers outside the United States using Zoltek’s process patent, imported the result, and used it to make F-22 jets. Under the rule of Ajinomoto, if the United States were a private actor, it would be liable for infringement. Nowhere else, among the United States’ allies would this use not create liability for the sovereign.

Judge Dyk came to his conclusion by looking only at section 271(a), which does not hold a private actor liable for the type of conduct involved in this case. However, that mischaracterizes the history and relationship of section 1498 and 271. The drafters of section 1498 specifically designed it to give aggrieved patent owners a remedy against the United States like that against a private actor. The legislature enacted section 1498 in 1910 and in 1948 it received subsection (c). The legislature did not pass section 271 until 1952. This does not mean that section 1498 was modeled on section 271; in fact, Section 1498 could not have been modeled on section 271 because section 1498 was created in 1910 and amended in 1948, while section 271 was not created until 1952. Even in 1952, section 271(a) was just a

246 Id. at 32.
247 Id. at 55.
248 Zoltek, 442 F.3d at 1349.
249 Id.
251 Supra at note 7, 13.
252 Supra at note 4.
253 Supra at note 7, 13.
254 Supra at note 4.
declaration of the definition of infringement. Section 271(a) did not create infringement, it merely codified the then current legal definition of infringement.

Most of the changes to section 1498 have been made to equalize the liability of the government and a private actor. First, the legislature granted rights that were similar to a private actor by creating section 1498. Then, the United States narrowed the jurisdiction to coincide with that of a private actor by adding subsection (c) to section 1498. Now, a private actor has become more liable than the government. If the intention, as has been demonstrated by almost 100 years of legislative history, is for 1498 to keep pace with that of a private actor, like Judge Dyk so adamantly argues for in his concurrence, then surely the government should have the same liability as that of a private infringer under 35 U.S.C. 271(g).

Finally, Judge Dyk’s holding, that there was no Fifth Amendment takings claim, ignored the differences between a constitutional takings claim and a tort-based patent infringement claim. Like Judge Gajarsa, Judge Dyk found that an aggrieved patent owner must use section 1498 to bring a takings claim against the government and since section 1498(c) bars any claim in this case, there was no cause of action for a takings claim. However, a takings claim is independent of and different from the tort of patent infringement, therefore, Judge Dyk’s breif argument was unpersuasive.


256 Id.

257 Supra at note 7.

258 Supra at note 13.

259 Supra at note 123.


261 Id.

262 Id. at 1366.
V. The Solution to Clarify 28 U.S.C. 1498

The holding of this case relies on inconsistent and erroneous case law.\textsuperscript{263} The majority’s holding leaves doubt as to what the legal precedent is because each judge wrote an individual and very different opinion many pages longer than the majority. The legislature again needs to step in and rectify the situation as it did in 1910 and 1918, when the legislature responded to a cry for help from patent owners who were being denied their rights.

A. Proposal One: Bring Section 28 U.S.C. 1498 up to Speed with the Patent Act

The simplest solution would be to add a provision to section 1498 like the Process Patent Amendment Act of 1988 added to section 271. This would then fix the gap in liability between the government and a private actor that was left when the legislature added subsection (g) to the patent act.\textsuperscript{264} Until recently, the government’s liability has been similar to that of a private actor for using a patent.\textsuperscript{265} It is unethical for the government to take advantage of a loophole that the legislature has expressly shown its repugnance for by creating a provision addressing solely that issue for private actors.\textsuperscript{266} In addition, the court’s current interpretation of section 1498 encourages the government to outsource the production of patented devices and processes to avoid paying patent owners for the use of their patent.

The legislative histories of sections 1498 and 271 evidence an intent for the two statutes to stay current and consistent with each other.\textsuperscript{267} Just as the Process Patent Amendment Act of 1988 stopped infringers from practicing one step of a process patent offshore to avoid liability,

\textsuperscript{263} \textit{Supra} at Part III.C.ii (discussing the line of cases from \textit{Deca} to \textit{Motorola}).

\textsuperscript{264} \textit{Supra} at Part II.B (discussing the effect of adding subsection (g) to 35 U.S.C. 271).

\textsuperscript{265} \textit{Id.} (discussing the parallel liability of the government and private parties under 28 U.S.C. 1498 and 35 U.S.C. 271 respectively).

\textsuperscript{266} \textit{Supra} at note 18.

\textsuperscript{267} \textit{Supra} at Part II.B.
an amendment of similar nature would prevent the government from doing the same.\textsuperscript{268}

Therefore, amending section 1498 would not be radical, but remedial.

This solution would still leave judicial debate as to how to interpret section 1498 because unlike the United Kingdom, Canada, France, and Russia, the United States’ waiver of sovereign immunity is not located in the Patent Act. The issue of interpretation and application would continue to plague section 1498.

\textbf{B. Proposal Two: Include Government Use in the Patent Act}

A more comprehensive and lasting solution would be to create a provision under the Patent Act, addressing compulsory licensing and governmental use. According to this model, the Patent Act would require the government first to try to negotiate a license directly with the patent owner like the Canadian Patent Act.\textsuperscript{269} Only if the government or government contractor used a patent without permission would the matter be resolved in court. If a lawsuit were necessary, the Patent Act would hold the government liable to all subsections of section 271 like a private actor. However, the damages would be limited to compensation, as the court and legislature have clearly expressed no desire to allow injunctions against the government.\textsuperscript{270} This proposal has three substantial benefits over the previous proposal.

First, this is a more lasting solution because it not only fixes the gap found today, but it would prevent future gaps from occurring. Because the new compulsory licensing and governmental use provision suggested in this paper would be located under the Patent Act, it

\textsuperscript{268} Id.

\textsuperscript{269} 19(2).

\textsuperscript{270} Supra at Part II.B.
would be bound to the application and interpretation of the Patent Act much like the patent laws of United Kingdom, Canada, France, and Russia. Any amendments or judicial interpretations under the Patent Act would automatically apply to the government.

A second benefit of this proposal is that patent owners would have greater protection from governmental use. The new provision should lay out procedural steps the government must or is encouraged to take on its own with the patent owner, before legally proceeding to court. Like Russia and the United Kingdom, the United States government should have to give notice to any patent owner if they intend to use the owner’s patent. Then, the government should have to try to negotiate a license with the patent owner. This model would give both parties the opportunity to reach the best deal possible. Only if one party was being unreasonable or if the government did not follow the procedures set by the Patent Act would a lawsuit ensue. Even then, the Patent Act would protect the patent owner because the court would treat the government like a private actor in regards to section 271.

Third, although this solution would require more time initially, the time and money saved in the end would far outweigh the costs. As with any legislation, authors would have to create many drafts, point of views articulated, and investigations undertaken before anyone voted on the amendment. However, the time saved not arguing over amending 1498 every time the legislature amends section 271, as is presently occurring and occurred in 1960 during the creation of subsection (c), would surely outweigh the time spent initially. This solution would also bring the United States back up to speed with the rest of its allies.

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VI. Conclusion: The Uncertainty Created by the Court in Zoltek v. U.S. Requires A Solution

The decision in Zoltek underscored the problems that aggrieved patent owners now face when bringing actions against the government for using their patent.\(^{272}\) Zoltek has shown that there is a likely unintended discrepancy between the culpability of an infringer under 28 U.S.C. 1498 and 35 U.S.C. 271.\(^{273}\) This divergence is important because it leaves the government less liable than a private actor and actually encourages the government to outsource the use of a patented process.\(^{274}\) It is clear from the legislative history of section 1498, especially in relation to section 271, that section 1498 was intended to make the government’s liability equal to that of a private infringer.\(^{275}\) The last amendment to the Patent Act has left a gap between section 271 and 1498, which the legislature has not yet fixed.\(^{276}\)

Zoltek also highlighted problems caused by an erroneous line of cases starting with Decca.\(^{277}\) It is unfortunate and also ironic that Decca’s interpretation - that although section 271 and 1498 are similar, they parallel and do not rely on each other for interpretation - is now being used by the majority in Zoltek to say the exact opposite.\(^{278}\) Although Judge Gajarsa stated his displeasure with relying on this “unchecked propagation of error,” he nevertheless joined the majority.\(^{279}\) It is quite apparent that the most recent use of Deeca in NTP is incorrect and the

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\(^{272}\) Zoltek Corp. v. U.S., 442 F.3d 1345 (Fed. Cir. 2006).

\(^{273}\) *Supra* at Part II.B.

\(^{274}\) Id.


\(^{276}\) *Supra* at Part II.B.

\(^{277}\) *Supra* at Part III.C.ii.

\(^{278}\) Decca, 640 F.2d at 1167.

\(^{279}\) Zoltek Corp. v. U.S., 442 F.3d 1345, 1353 (Fed. Cir. 2006).
court should reject it. It is confusing why no judge has yet rejected its use or why when Judges Gajarsa and Dyk had the perfect opportunity, they declined to do so.

So in what position does that leave the law? That depends on which judge you find most convincing. It is clear that, because section 1498 does not have a similar provision to that of section 271(g), the court will not hold the government liable as long as at least one step of the process patent occurred outside the United States.²⁸⁰ It is not clear how the Judges reached that decision because each Judge took a different road to get there.²⁸¹ Obviously, this problem needs a solution.

One solution is to simply amend 28 U.S.C. 1498 to have a subsection waiving the sovereigns immunity to action as defined in 35 U.S.C. 271(g). This solution leaves out the other amendments to section 271, such as subsection (f), and any future amendments. A better solution is to provide relief against the government in the Patent Act, as so many other countries have chosen to do. This solution inherently incorporates all present and future amendments and levels the liability for the government and private actors. This solution is also congruent with the patent laws of most of the United States’ allies. One thing is for sure, no one but the United States government can claim that Zoltek concluded in a just, fair, or equitable decision.

²⁸⁰ Id. at 1350.
²⁸¹ Zoltek, 442 F.3d 1345.