POST GRANT PATENT CHALLENGE PROCEDURES UNDER FIRE AT THE SUPREME COURT*

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*This paper is authored *pro bono* without participation by the author on either side of the controversy. The author acknowledges that he had been a partner at the firm of counsel for one of the parties in the pending Supreme Court appeal in *Oil States Energy Services*; he has had no participation in the case, either as a partner for that firm nor since his retirement from the firm. (The petition for *certiorari* was filed after such retirement.)

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THIS VERSION: Oct. 31, 2017 **PostGrantPaperOct31RR.pdf**

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***PREFACE*: 2018 PATENT CONSTITUTIONAL CRISIS**

Four days after Thanksgiving, on Monday, November 27, 2017, the Supreme Court will devote its entire argument calendar to consider the Constitutionality of inter partes patent review procedures in *Oil States Energy Services v. Greene's Energy Group* and *SAS Institute Inc. v. Matal*. Merits decisions are expected in each case in the first half of 2018, before the current Term expires at the end of June 2018. The *Questions Presented* are:

***Oil States Energy Services v. Greene's Energy Group*, S. Ct. No. 16-712**: The *Question Presented* asks "[w]hether *inter partes* review – an adversarial process used by the Patent and Trademark Office (PTO) to analyze the validity of existing patents – violates the Constitution by extinguishing private property rights through a non-Article III forum without a jury."

***SAS Institute Inc. v. Matal*, Supreme Court No. 16-969**: The *Question Presented* asks: "Does 35 U.S.C. § 318(a), which provides that the Patent Trial and Appeal Board in an inter partes review 'shall issue a final written decision with respect to the patentability of any patent claim challenged by the petitioner,' require that Board to issue a final written decision as to every claim challenged by the petitioner, or does it allow that Board to issue a final written decision with respect to the patentability of only some of the patent claims challenged by the petitioner, as the Federal Circuit held?"

A decision in the *Oil States Energy Services* case has the *potential* to disrupt the current other post grant patent challenge systems by declaring them to be Unconstitutional. In a worst case scenario, such an extreme decision would immediately trigger a chaotic, crisis situation for patent practice, and also immediately create the need for system reforms of one kind or another.

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***PREFACE*: 2018 PATENT CONSTITUTIONAL CRISIS**

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I. OVERVIEW

This work explores PTO post grant patent procedures to attack patents. Much space is written in the context of challenges to such procedures, including a pending Supreme Court attack in *Oil States Energy Services* that such procedures may be unconstitutional: A Supreme Court merits decisions is anticipated before the end of June 2018. No matter what the Court decides, a legislative amendment to the patent law is proposed, *here,* that would *add* the possibility of a pre-grant pre-examination patent challenge.

There are two focal points for this work: The primary focus of this work is from a post-patenting perspective, where the die has been cast for such proceedings because of actions taken – or not taken – by the patentee both in his preparation of the application as well as prosecution leading up to the grant of the patent.

Also important, and prior to considering this primary focus, it is *also* one of the objectives of this work to consider how to draft and prosecute an application *before grant of the patent* to mitigate or avoid altogether some of the negative consequences that can be the result of a regular prosecution of the application up to grant. Such pre-grant considerations are summarized in § XII, *Pre-Grant Prophylactic Drafting Options*. First and foremost is the necessity to understand time pressures on the Examiner, and how the patent draftsman can minimize such pressures – and thereby permit time for a through merits examination of formalities. *See* § XII-A, *Crucial Understanding of Examiner Time Pressures Crucial Understanding of Examiner Time Pressures.* A serious shortcoming to what appears to be a majority of the patent community is the "broadest reasonable

interpretation" of patent claims; but, any definition of a claim limitation at the point of novelty can be given a narrower interpretation through proper draftsmanship. *See* § XII-B, *Cabining the Broadest Reasonable Interpretation.* Above all, a few carefully crafted claims should be the draftsman's goal, *see* § XII-C, *A few, Well Crafted Original Claims*, coupled with citation of the most relevant prior art *without* unnecessary, redundant citations, *see* § XII-D, *"Claim Flooding" must be Avoided.*

The increasingly technologically complex world coupled with the proliferation of prior art in various forms make it imperative that the Patent Examiner is assisted in his task by third parties through filings, once largely *prior* to grant but increasingly filed *post* grant. *See* § II, *The Global Movement to a Post-Grant System.*

While the major patent granting authorities of the world over the past two generations have moved to a post-grant system of inter partes review, the United States system has been *too* effective in weeding out bad patents in its versions of the system: Clear challenges to the post grant review system now exist including the *Restasis* case on its way to the Federal Circuit; the case focuses upon a too a clever title transfer strategy that seeks to avoid a Patent Office validity challenge.

More fundamentally important, however, are the merits appeals at the Supreme Court in *Oil States Energy Services* (challenging the Constitutionality of post grant invalidation procedures) and *SAS Institute v. Matal* (a second but less important challenge to such procedures.). . *See* § III, *Post Grant Proceedings under Judicial Challenge.*

This paper has a particular focus on the system of Post Grant Review, or PGR: It represents the most powerful PTO weapon for a patent challenger, particularly for highly technical issues. *See* § IV, *The Narrow Filter of Post Grant Review.* PGR is particularly important for continuing applications where there is a prior art publication between parent and actual filing date. *See* § IV-A, *Special Situation of Continuation Patent Validity.* Patentees have felt the sting of PGR: But, public statements criticizing this procedural tool often fail to mention that it is used against less than one (1) percent of issued patents. *See* § IV-B, *One Decision for Every 600 Patents per Year.* The relative number of petitions is also seen to be going down as the patent bar becomes more sophisticated. *See* § IV-C, *Maturation of the Patent Bar.* At the same time, the *need* for post grant review continues to be important as third party patent challengers act to weed out bad patents, thereby fostering competition. *See* § IV-D, *Need for Validity "Police" at the PTO.* (What is also generally not mentioned in the analysis of statistics focused on *final* decisions in PGR and other post grant review procedures is the fact that a significant number of *clearly* losing scenarios for patentees that normally would have been dropped long before a final decision are instead *maintained* until a final and invariably losing decision. The economic incentive to maintain a valuable patent until the bitter end more than pays for the legal costs of a continuation of proceedings that delays the inevitable invalidity ruling.)

A set of case studies is provided that shows how and why post grant review plays a vital role in the patent system. *See* § V, *Case Studies.*

To be sure, there are nuanced differences between the various post grant challenge procedures. Love and Ambwani explain that the significant differences in the outcomes of the various types of post grant review options open to patent challengers.[1]

One of the possible reforms for the system would be to encourage preissuance submissions *prior to* examination. It has become apparent that there is an inefficiency in the system that *discourages* third party participation at an early date. Why have third parties hold off with their patent challenges until *after* a complete examination of the patent until the time for a Post Grant Review? It makes sense to *encourage* a third party challenge *prior* to examination to make the overall process more efficient and clear up patents of dubious worth at the earliest opportunity. A modest proposal is made for a simple modification of the statute to

[1] Brian J. Love & Shawn Ambwani, *Inter Partes Review: An Early Look at the Numbers*, 81 U. Chi. L. Rev. Dialogue 93, 101 (2014)("[T]he rate at which petitioners have succeeded on the merits of their petitions is markedly different [comparing Inter partes review and inter partes reexamination]: *inter partes* reexaminations ended in complete victory for the petitioner just 31 percent of the time, less than half as often as for [Inter partes review]. In addition, over 60 percent of *inter partes* reexaminations ended with patentees securing new, amended claims.")(footnote omitted)

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encourage pre-examination patent challenges. *See* § VI, *Pre-Examination Preissuance Submissions.* This proposal for a pre-grant procedure is made *whether or not* the Constitutionality of the current PGR system remains after the Supreme Court decision in *Oil States Energy Services,* but would become even more important if that decision concludes that the current system is Unconstitutional.

Another reform deals with the problem of motions to amend post-grant proceedings. Instead of changing the current post-grant procedures, which would make it impossible or next to impossible to meet the statutory time deadlines to complete such proceedings, suggestions are offered for practice evolution to obviate such problems. *See* § VIII, *Problematic Motions to Amend Post Grant Actions.* Proceedings would be simplified and facilitated if pre-examination filings were made, which is the subject of a proposed rules change. *See* § IX-A, *Pr-Examination Preissuance Submissions.*

Statistics showing an apparently very high rate of invalidity rulings in post grant proceedings show that this high rate is inflated by the conduct of patentees who too often take "hopeless" cases to a final decisions. This is a serious problem. Once a patentee has become involved in such a proceeding that started in a good faith belief that the patent was valid, the handwriting is often there, "on the wall", that this will not be the outcome. But, the case continues as a sham – whether innocent at first or not – as there is little financial incentive for the patentee to end such a proceeding as he may benefit from continuation of the proceeding such as by way of continued royalties before a patent is finally found invalid. *See* § IX-B, *Terminating Continuation of Sham Post Grant Proceedings.*

To obtain a favorable result in a post grant proceeding, there are several important prophylactic measures that should be considered *prior to the patent grant. . See* § XII, *Pre-Grant Prophylactic Drafting Options*. The first and perhaps most important point is that Examiners are under tremendous time pressures. To best guarantee that an Examiner will be able to find otherwise fatal drafting errors, it is important to understand the limited time the Examiner has to examine each application. If the Examiner is forced to take a shortcut to examination because the applicant has flooded the Office with too many claims and too many prior art citations, the short end of the stick is the formalities examination, leading up to a grant of claims that will then be easy to challenge. *See* § XII-A, *Crucial Understanding of Examiner Time Pressures Crucial Understanding of Examiner Time Pressures*. Cabining the "broadest reasonable interpretation" of a claim element at the point of novelty should also be considered through a *specifid* definition of the claim element in a *Summary of the Invention. See* § XII-B, *Cabining the Broadest Reasonable Interpretation*. It should go without saying that, given the discrete, limited amount of time each Examiner has for an examination of an application, a focus should be on presentation of a minimal number of claims, *see* § XII-C, *A few, Well Crafted Original Claims*, and upon the citation of all *most* relevant prior art, without citation of redundant "chaff", *see* § XII-D, *"Claim Flooding" must be Avoided*.

II. THE GLOBAL MOVEMENT TO A POST-GRANT SYSTEM

Historically, patent offices have utilized a pre-grant opposition system, as opposed to the current post-grant systems now in vogue. This is manifested by the systems of Europe and Japan. This has changed in recent decades both for Europe and Japan.

A. The Patent Law Treaty (1994)

Beginning in the 1980's, and proceeding for a decade, the Patent Law Treaty, the PLT, was negotiated in Geneva under auspices of the World Intellectual Property Organization. *The treaty was never ratified by the United States and has never entered into force as part of the American legal landscape*.[2]

The PLT expressly proscribes a pre-grant opposition,[3] but has a grandfather clause which permits a Contracting Party with a pre-grant opposition system ten years from the date of the Patent Law Treaty to switch to a post-grant system,[4] provided a timely notice is given to the Director General.[5] Unfortunately, the leader of the United States PTO unilaterally refrained from acceptance of the PLT,

[2] The Patent Law Treaty was killed by the unilateral action of then PTO Director Harry Manbeck.

[3] *See* Wegner,PATENT HARMONIZATION, § 2160, *Administrative Revocation [Art. 18]*, p. 277 (London, Sweet & Maxwell 1993)(quoting the Patent Law Treaty, Art. 18(2)(a)("No Contracting Party may allow any party to oppose, before its Office, the grant of patents (pre-grant opposition).")

[4] Id., Art. 18(2)(b)
[5] *Id.*, Art. 18(2)(c).

dooming this treaty (presumably for reasons *other* than the issue of post grant review.)

A member of the Patent Office involved with the creation of the treaty as a representative for the United States provides the following explanation:

Article 18(1) [of the PLT] requires Contracting Parties to provide for the revocation of patents granted after substantive examination. With regard to such patents, "any person shall have the right to request the competent Office to revoke the patent, in whole or in part, at least on the ground that, because of one or several documents available to the public, the conditions of novelty or inventive step are not satisfied." United States law provides an opportunity for any person at any time to file a request for reexamination by the Office of any claim of a patent on the basis of certain specified prior art. United States law, therefore, is consistent with Article 18(1)(a).

As to the time frame in which a person can request revocation, Article 18(1)(b) provides that the period "shall commence from the announcement in the official gazette of the grant of the patent and shall not be less than six months." United States law is consistent with this provision since it provides that a request for reexamination may be filed "at any time during the period of enforceability of a patent...." Moreover, United States law is consistent with the requirement found in Article 18(1)(c) that a request for revocation may not be "based on grounds of non-compliance with formal or procedural requirements."

More problematic are paragraphs (d) and (e) of Article 18(1) which address the procedures to follow once a person requests revocation. Under 35 U.S.C. section 304, if a third party requests reexamination, the patent owner can respond to the request. Following that, the third-party requestor is afforded an opportunity to reply to the patent owner's response. Thereafter, the proceedings before the USPTO are conducted ex parte, with the third-party requestor excluded. Therefore, under United States practice, even if the USPTO "departs" from the original request after the inception of the ex parte proceedings, the third-party requestor has no opportunity to "present his arguments on the grounds on which the office intends to depart from the request." The third-party requestor's lack of an

opportunity to present an argument is contrary to the provisions of Article 18(1)(d), thus necessitating a change to United States law.[6]

B. European Shift to A Post-Grant System

European countries through the European Patent Convention, the EPC, adapted their local practice to a post-grant opposition system. The European Patent Convention defines the ground rules for an opposition proceeding.[7] As a prime example of national law integrated into the European system, prior to the EPC the United Kingdom featured a pre-grant opposition system; it was abolished in favor of a post-grant system as part of the implementation of the European Patent Convention. This change is explained by Justice Carr in *Fujifilm Kyowa Biologics*:

¶ 40 *** [T]he procedure for opposing a patent during the pre-grant process provided for in section 14 of the Patents Act 1949 , was abolished when the Patents Act 1977 was enacted and there is no corresponding provision in the 1977 Act. It submits that the position is *a fortiori* with respect to European patents: Parliament

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[6] Richard C. Wilder, An Overview of Changes to the Patent Law of the United States After the Patent Law Treaty, § III-B, *Administrative Revocation Provisions of the PLT and Reexamination Practice in the United States*, 26 J. Marshall L. Rev. 497, 530-31 (1993)(footnotes omitted).

[7] European Patent Convention, Art. 105,*Opposition*:
"(1) Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid.
"(2) The opposition shall apply to the European patent in all the Contracting States in which that patent has effect.
"(3) Opponents shall be parties to the opposition proceedings as well as the proprietor of the patent.
"(4) Where a person provides evidence that in a Contracting State, following a final decision, he has been entered in the patent register of such State instead of the previous proprietor, such person shall, at his request, replace the previous proprietor in respect of such State. Notwithstanding Article 118, the previous proprietor and the person making the request shall not be regarded as joint proprietors unless both so request."

can hardly have contemplated that despite the abolition of the pre-grant opposition with respect to 1949 Act patents regulated by UK law, the court would nonetheless take it upon itself to act as a forum for pre-grant examination of European applications under the 1977 Act. The European Patent Convention does not provide for pre-grant oppositions but instead states that opposition may be filed within nine months "from the publication of the mention of the grant of the European patent" (Article 99).

¶ 41 A clear summary of the history and structure of the European patent system, including the deliberate exclusion of pre-grant oppositions; the provision for post-grant opposition proceedings; and the ability to apply for revocation of national designations of European patents whilst an opposition is continuing; was provided by Jacob LJ in *Unilin Beheer BV v Berry Floor NV* [2007] EWCA Civ 364; [2007] F.S.R 25 at [5]-[18]. This supports the conclusion that, both as a matter of UK law and under the EPC, pre-grant opposition is excluded.

AbbVie submits that, in effect, the Arrow judgment impermissibly introduces such pre-grant opposition by way of declaratory relief.

¶ 42 I agree that there is no provision for pre-grant oppositions, either in respect of UK or European patents. That is why, in common with Kitchin J., I agree that the UK Court cannot conduct a pre-grant opposition to European Patent applications, as this would usurp the function of the EPO, which would be inconsistent with the framework of the EPC and the Act. This is why Kitchin J. stated at [60] that "I find it hard to conceive of any circumstances in which it would be appropriate for this court to grant a declaration that no valid patent could be granted on a divisional application which is being prosecuted before the EPO." [8]

[8] *Fujifilm Kyowa Biologics Co., Ltd. v. Abbvie Biotechnology Limited,* [2016] EWHC 425 (PAT), 2016 WL 00750567 (High Court 2016)(Carr, J.).

The opinion in *Unilin Beheer BV v Berry Floor NV* relied upon in *Fujifilm Kyowa Biologics* is explained by the Max Planck scholar Heath:

[*Unilin Beheer v Berry Floor* is] concerned [with] a (successful) infringement claim that became final before the patent on which it was based was invalidated by the European Patent Office. The court flatly denied any remedy by the defendant in the absence of a statutory provision that would allow a retrial or even the estoppel of unenforceability: 'Where a final decision has been made on a fair context between the parties, that should stand as the final answer between them' (point 45). This principle of *res judicata* should stand ; unless an intention to exclude that principle can properly be inferred as a matter of construction of the statutory provisions' (point 54). And in fact no such intention could be found either in English domestic law or in the EPC whose *traveaux préparatoires* 'give a firm indication that national procedural law … is to apply to European patents when litigated in a national court' (point 69). Thus, the decision is not about the precedence of UK proceedings over those of the European Patent Office's, but rather about the absence of an estoppel or the possibility of a retrial under UK law.[9]

Dr. David Lancaster provides further helpful information in his analysis of *Virgin Atlantic Airways Ltd v Zodiac Seats*:

In July 2007, Virgin Atlantic Airways Ltd (Virgin) brought an action against Zodiac Seats UK Ltd (Zodiac) for infringement of the UK designation of the patent (the EP(UK)). Zodiac denied infringement and alleged that, to the extent that the EP(UK) covered its products, it would be invalid in view of the prior art and for added matter. Virgin appealed against the decision on infringement, and Zodiac cross-appealed on validity.

[9] Christopher Heath, *Wrongful patent enforcement: threats and post-infringement invalidity in comparative perspective*, 2008 IIC 307, 316 (2008)

In February 2008, Zodiac, along with a number of companies who had bought its seats, commenced opposition proceedings against the patent at the EPO, relying on the same prior art that was before the Patents Court in England.

In January 2009, following a trial in the Patents Court, Lewison J. held that Zodiac had not infringed the EP(UK) and that, if the claims had been wide enough to cover Zodiac's seating system, the EP(UK) would be invalid for added matter.
In March 2009, the Opposition Division of the EPO upheld the validity of the patent. Zodiac and other opponents of the patent appealed the decision to the [Technical Boards of Appeal,] the TBA. Zodiac proposed that if the appeal on validity succeeded in England, the making of any final order by the Court of Appeal should be stayed pending the final determination of the opposition proceedings at the EPO. Virgin did not agree to a stay. In May 2009, Jacob L.J. gave a direction that the Court of Appeal would not grant a stay of the English proceedings.

In October 2009, the Court of Appeal gave judgment reversing Lewison J.'s earlier decision on validity, holding the EP(UK) to be valid and infringed.
In December 2009, following an application by Zodiac, the Court of Appeal refused to stay the order on the appeal, mainly on the ground that it was pointless to do so because the effect of the decision in *Unilin Beheer BV v Berry Floor NV* was that any later decision of the TBA revoking the patent would make no difference because the decision of the Court of Appeal would bind the parties *per rem judicatam*.

On January 12, 2010, the Court of Appeal therefore sealed an order making a declaration that the EP(UK) was valid and infringed, together with an injunction and an order for an inquiry as to damages. The damages Virgin wished to recover exceeded £49 million.

In September 2010, the TBA decided that all claims of the patent that had been held to be infringed by the English courts were invalid in view of the prior art. By the time the TBA gave its decision, the English appeal proceedings had been concluded and permission to appeal the Court of Appeal's decision on validity had been refused by the Supreme Court.

The question on appeal

The question on appeal to the Supreme Court was whether Zodiac was entitled to argue in an inquiry for damages that no damages were payable to Virgin on the basis that the claims held to have been infringed by the Court of Appeal were subsequently invalidated by the TBA. It was accepted that the injunction would cease following the TBA's decision, since amendment to the patent in EPO opposition proceedings was deemed to be retrospective as from the date of grant. To answer the question, it was necessary for the Supreme Court to assess whether the Court of Appeal was right to say that its Order of January 12, 2010 continued to bind the parties *per rem judicatam* despite the fact that the relevant claims were later held to be invalid by the TBA.

The decision of the Supreme Court

Lord Sumption gave the leading judgment, with Lord Neuberger giving a concurring judgment. The other three judges agreed with both judgments.
The Supreme Court reviewed the law of *res judicata* and concluded that Zodiac was not precluded from relying on the decision of the TBA in the inquiry as to damages. The court affirmed the principle that the patent in the form as upheld by the TBA must be treated as the one that existed at the relevant time. Accordingly, the EP(UK) in the form upheld by Court of Appeal had to be treated as if it had never existed. Further, *res judicata* did not apply to the ongoing damages inquiry because Zodiac was not seeking to reopen the validity of the relevant claims, which was one of the questions determined by the Court of Appeal. Rather, Zodiac sought to rely on the fact that the patent had been amended, not the reasons for its amendment.

The Supreme Court also held that the authorities that had been followed by the Court of Appeal in reaching its decision were wrongly decided, primarily on the basis that those cases held cause of action estoppel to be absolute generally rather than being absolute only as regards points actually determined by the earlier decision. Further, those cases were wrong to suppose that taking into account the subsequent revocation of a patent by the EPO would be rehearing the question of validity that had been decided by the court. The effect of revocation by the EPO meant that the patent in that form is deemed never to have existed.[10]

C. Japan-U.S. Agreement to End Pre-Grant Oppositions

The conventional wisdom concerning the perceived evils of a pre-grant review process is expressed by Wolfson in a student note which accurately portrays the general view of American industry at the time (whether or not it corresponds to the reality in Japan of the time):

Publication of a patent application in Japan, a necessary part of the Japanese pre-grant opposition procedure, is required eighteen months after filing. Unlike the EPO, which has a post-grant opposition system, Japan is the only country in the world that allows pre-grant oppositions. The European post-grant opposition system allows competitors to oppose patents in an adversarial hearing for nine months following publication of the patent grant. Alternatively, the United States has no adversarial opposition system. Instead the United States chooses to use a post-issuance reexamination procedure in which the U.S. PTO reexamines issued patents in an ex parte hearing upon the request of any party.

Under the Japanese system, any person may file written opposition to a patent application within three months of its publication. ***This pre-issuance publication system [in Japan] allows large Japanese firms to profit by flooding the JPO with hundreds of applications for competing patents after they view U.S. and other foreign companies' patent applications***. The newly signed Letters of Agreement

[10] Dr David Lancaster, *Virgin Atlantic Airways Ltd v Zodiac Seats UK Ltd: implications for stays in English patent proceedings,* 2013 E.I.P.R. 609, 610-11 (2013)(explaining *Virgin Atlantic Airways Ltd v Zodiac Seats UK Ltd* [2013]

will eliminate the Japanese pre-grant opposition system and its serial hearings, in favor of a consolidated post-grant opposition hearing system.[1]

The letter agreement between Japan and the United States is reproduced below:

Japan-United States: Exchange of Letters Concerning Patent Systems Agreement[1]

August 16, 1994
Washington, D. C.

Introductory Note by Thomas Robertson

On August 16, 1994, representatives of the United States and Japanese Governments exchanged letters by which they agreed to make certain modifications to their patent systems. Signed by U.S. Secretary of Commerce Ronald H. Brown and Japanese Ambassador Takakazu Kuriyama, the exchange was a result of the intellectual property discussions under the Economic Harmonization Basket of the so-called "Framework" discussions between the two countries. Initiated under the U.S.-Japan Framework for a New Economic Partnership agreement signed by President Clinton and then-Prime Minister Hosakawa on July 10, 1993, the Framework discussions began in September 1993. The intellectual property discussions presented an opportunity for each country to air grievances it has with the other's intellectual property system. While there was no restriction as to subject matter, the talks primarily focused on the patent systems of the two countries. The Japanese concerns with the U.S. system primarily deal with the differences between the U.S. system and most other patent systems, including that it is a first to invent rather than first to file system; applications are not published; interferences are necessary to determine inventorship in some cases; the practice of reexamining patents is restricted as to the grounds for invalidation and who may participate; and restriction practice is ambiguous in some respects. The primary U.S. concerns with the Japanese patent system include the inability to make English-language filings in Japan that are followed up with Japanese translations; the long delays in the examination of patent applications in the Japanese Patent Office; the pre-grant opposition system and the practice of addressing oppositions seriatim rather than at the same time; the narrow grant of

patent claims; the availability of dependent patent compulsory licenses; and the lack of a full 12-month grace period. The U.S. representatives also raised concerns about delays in court cases in Japan and the absence of a mechanism to protect confidential information in court proceedings.

The negotiations on the exchange of letters were carried out primarily by the heads of the two delegations to the intellectual property discussions, Michael Kirk, Deputy Commissioner of the U.S. Patent and Trademark Office (PTO), and Toshido Ochiai, then-Director-General of the General Administration Department of the Japanese Patent Office. In the end, three of the primary U.S. concerns and two of the primary Japanese concerns were addressed in the letters.
Under the exchange of letters, the Japanese Patent Office will, by April 1995, introduce legislation that would, after January 1, 1996, no longer allow pre-grant oppositions to the issuance of a patent and would require the consolidation of oppositions; by January 1996, establish a procedure whereby applicants can request that their applications be fully processed within 36 months; and by July 1995, greatly restrict the instances in which the grant of dependant patent compulsory licenses is possible. The effect of these changes is likely to be a more rapid examination system and an enhanced confidence on the part of patentees that their patents will not be subject to compulsory licenses.

On behalf of the U.S. Government, Secretary Brown committed to submit legislation by September 30, 1994, that would end the practice of keeping applications secret until grant by publishing them 18 months after their priority filing date. Rather than submit legislation, the U.S. PTO has instead issued draft rules which if adopted would establish the 18-month publication system. Early publication will ensure that technology is disseminated promptly to U.S. researchers and inventors in the English language, putting them on an equal footing with foreign researchers and inventors whose countries publish all pending applications 18 months after filing. Secretary Brown also committed the U.S. Government to revise its reexamination procedures by January 1, 1996, so that the grounds for requesting reexamination include compliance with all aspects of 35 U.S.C. 112 except the best mode requirement (i.e., that the application contain a written description of the invention, the manner and process of making and using it, and claims in proper format), and third parties have an expanded opportunity to participate in reexaminations.

Expanded reexamination will provide third parties with a less expensive and more rapid procedure for challenging claims than is available through litigation in Federal court. Finally, Secretary Brown stated that the U.S. PTO would not grant a dependant patent compulsory license other than in certain limited cases. This is not a significant provision in light of the fact that the U.S. PTO does not now grant such licenses.

These commitments supplement an earlier exchange of letters between U.S. and Japanese representatives in which the Japanese Patent Office agreed to accept English-language filings by July 1995, and the U.S. PTO agreed to seek the modification of U.S. patent term from 17 years from grant to 20 years from filing. The change in the way patent terms are calculated in the United States was accomplished in the Uruguay Round Agreements Act, which was enacted into law on December 8, 1994 (Pub. L. 103-465). At this time, there are no plans for the working group to resume consultations.

Letter from the Japanese Ambassador to the Secretary of Commerce

EMBASSY OF JAPAN
WASHINGTON, D. C.

August 16, 1994

Dear Secretary Brown:

I have the honor to refer to the recent discussions between the representatives of the Government of Japan and the Government of the United States of America concerning the patent systems of the two countries. I am pleased to inform you that the Government of Japan confirms that, on the basis of these discussions, the Japanese Patent Office and the United States Patent and Trademark Office are to take the actions described in the Attachment hereto. In some instances, the implementation of these measures will require approval of the Japanese Diet or the U.S. Congress.

We look forward to working with you on a regular basis on these and other matters of mutual interest in the field of intellectual property. These ongoing talks will allow the Working Group on Intellectual Property or its successor to meet annually, or upon the request of either government, to discuss the implementation of the above actions.

I believe that the above-referenced actions and continued efforts will further promote the good relationship in the field of intellectual property between Japan and the United States of America.

Sincerely,

Takakazu Kuriyama
The Honorable Ronald H. Brown Secretary of Commerce

Attachment: Actions to be taken by the JPO:

1. (a) By April 1, 1995, in order to institute a revised opposition system by January 1, 1996, the JPO is to introduce legislation to revise the opposition system.
(b) Under the revised system, oppositions are to take place only after the grant of a patent.
(c) Multiple oppositions in the revised system are to be consolidated and addressed in a single proceeding to minimize the time spent during opposition.
2. (a) By January 1, 1996, the JPO is to institute a revised system of accelerated examination.
(b) In the revised accelerated examination system:
(i) the JPO is to allow an applicant who has filed a patent application before a foreign national or regional industrial property office to request accelerated examination for a corresponding patent application filed in the JPO;
(ii) applications are to be processed to grant or abandonment within 36 months from the date of the request for accelerated examination;
(iii) the JPO may require the applicant to submit a copy of a search report, issued by the above mentioned national or regional industrial property office separately from or associated with its first substantive action on the merits; and

(iv) a fee, not to exceed the fee for filing an application, may be charged in addition to the normal fee for requesting examination but no working requirement is to be imposed.
3. Other than to remedy a practice determined after judicial or administrative process to be anti-competitive or to permit public non-commercial use, after July 1, 1995, the JPO is not to render an arbitration decision ordering a dependent patent compulsory license to be granted.

Actions to be taken by the USPTO:

1. (a) By September 30, 1994, in order to institute an "early publication" system by January 1, 1996, the USPTO is to introduce legislation to make applications publicly available 18 months after the filing date of the earliest filed application, a reference to which is made under 35 USC 119, 120, 121 or 365.
(b) The USPTO is to make publicly available all applications, filed after January 1, 1996, as soon as possible after the expiration of 18 months from the filing date or, where priority is claimed under 35 USC 119, 120, 121 or 365, from the earliest priority date. The drawing, specification, including claims, and bibliographic information of the application are to be made available to the public. Applications that are no longer pending and applications subject to secrecy orders are not to be made publicly available.

III. POST GRANT PROCEEDINGS UNDER JUDICIAL CHALLENGE

While the major patent granting authorities of the world over the past two generation have moved to a post-grant system of inter partes review, the United States system has been *too* effective in weeding out bad patents: There are now clear challenges to the post grant review system.

In the more than thirty-five years since the United States in 1980 introduced a first statutory provision for administrative patent revocation procedures at the Patent Office, such proceedings are under procedural judicial challenges both at the trial level in the *Restasis* case;[11] as well as in merits appeals at the Supreme Court with an oral argument on November 27, 2017, in both *Oil States Energy Services*[12] and *SAS Institute v. Matal,*[13] with merits decisions in the two cases expected by the end of June 2018.

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[11] In *Allergan, Inc. v. Teva Pharmaceuticals USA, Inc.* (E.D. Texas), the patentee Allergan sought to avoid a PTO patent validity attack by transferring formal title to the patent to the Saint Regis Mohawk Tribe (which then granted Allergan an exclusive license to the patents). The trial court determined that the clever scheme to transfer technical patent ownership to an Indian Tribe (with sovereign immunity) was *not* a successful avoidance of PTO jurisdiction to determine validity, and *also* rule ruled that the relevant claims of the Restasis patents are invalid on the basis of obviousness.

[12] In *Oil States Energy Services v. Greene's Energy Group,* Supreme Court No. 16-712, the *Question Presented* asks "[w]hether *inter partes* review – an adversarial process used by the Patent and Trademark Office (PTO) to analyze the validity of existing patents – violates the Constitution by extinguishing private property rights through a non-Article III forum without a jury."

[13] In *SAS Institute Inc. v. Matal,* Supreme Court No. 16-969, :the *Question Presented* asks: "Does 35 U.S.C. § 318(a), which provides that the Patent Trial and Appeal Board in an inter partes review 'shall issue a final written decision with respect to the patentability of any patent claim challenged by the petitioner,' require that Board to issue a final written decision as to every claim challenged by the petitioner, or does it allow that Board to issue a final written

Restastis case deals with a specific, clever strategy to avoid Patent Office review procedures, and is only at the stage of an appeal to the Federal Circuit where a decision is expected at some point in 2018; whether there is any realistic possibility for a Supreme Court appeal will be better seen once a Federal Circuit decision is reached. As to *Oil States Energy Services* and *SAS Institute v. Matal*, the *Oil States Energy Services* involves a frontal attack on the Constitutionality of post grant proceedings where the PTO determines the validity of a granted patent.

In particular, *Oil States Energy Services* considers whether the PTO administrative procedure challenges to patent validity "violate[ ] the Constitution by extinguishing private property rights through a non-Article III forum without a jury."[14]

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decision with respect to the patentability of only some of the patent claims challenged by the petitioner, as the Federal Circuit held?"

[14] *Oil States Energy Services*, supra note 2.

IV. THE NARROW FILTER OF POST GRANT REVIEW

Of the multiple post grant procedures open to patent challengers, Post Grant Review (PGR) is the most powerful tool for administrative revocation of patents. PGR is particularly useful to challenge a patent on a highly technical issue of patent law where the complexity of the technology adds a degree of sophistication and difficult to the legal issues.

A. Special Situation of Continuation Patent Validity

Some procedures are difficult for a non-technically savvy person to understand, whether a jurist of not. Continuing patent application practice may be at the top of the list:

Unlike the patent laws of the rest of the world, in the United States a patent application may be *refiled* over and over again as a continuing application such as a, a continuation-in-part, a "CIP." In a CIP new subject matter and changing claim scope are permitted. A technologically savvy and patent-trained person may be able to sort out subtle changes in the generations of CIP applications, such as determining that a later CIP application may not be entitled to rely upon the earlier or earliest date of filing: Where priority is denied to the parent of the CIP, the published (and other) work of the inventor more than a year before a later filing may constitute a statutory bar to invalidate the claims of the patent. The problem, here, is that prior to the PGR system it was difficult to establish such a statutory

bar in the District Court. Wherefore, the Lemelson saga permitted maintenance of his patents to the great cost of the public.

Professors Lemley and Moore point out that "[i]n the most extreme [CIP] cases, patent applicants add claims during the continuation process to cover ideas they never thought of themselves but instead learned from a competitor. The most egregious and notorious example of submarine patenting is Jerome Lemelson. Lemelson filed eight of the ten continuation patents with the longest delays in prosecution in our study. ***Those Lemelson patents spent anywhere from thirty-eight to more than forty-four years [pending] in the PTO***."[15]

Instead of reaching a conclusion of invalidity based upon denial of priority the judicial system created a new basis for invalidity, "prosecution laches." Former Judge Seto explains:

The Federal Circuit … decided that fourteen of Dr. Lemelson's patents relating to machine vision and bar code technologies were unenforceable under the doctrine of prosecution laches. The Federal Circuit, in affirming a decision by the District Court for Nevada, held ***that Lemelson's eighteen- to thirty-nine-year delay in executing his patent claims was unreasonable***, and found the patents unenforceable. The Federal Circuit's decision was dated September 9, 2005, after a host of companies had already paid Dr. Lemelson and his heirs a combined ***$1.5 billion in licensing fees***.[16]

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[15]Mark A. Lemley & Kimberly A. Moore, *Ending Abuse of Patent Continuations,* 84 B.U. L. Rev. 63, 76-77 (2004)(footnotes omitted; emphasis added by this writer). Since this article was written, Professor Moore has become a member of the Federal Circuit.

[16] Robert M. M. Seto,*A Federal Judge's View of the Most Important Changes in Patent Law in Half-a-Century,* 11 J. Tech. L. & Pol'y 141, 150 (2006)(footnotes footnotes om.itted; emphasis added by this writer).

Sullivan and Loretto explain the need for post grant review in the context of the Lemelson patents:

In particular, a renewed, and more focused, emphasis on the requirements of [35 USC] § 112, especially the written description, enablement, and definiteness standards, offers the opportunity for striking directly at the core problem with junk patents: that, however cunningly the inventor manipulated his specification and claim language, he himself simply did not make, or did not sufficiently disclose or claim, the technological advance from which he seeks to profit by asserting the claims against the systems of others (including those who actually made the technical innovations usable for the public). But neither these types of defenses, nor any of the other existing defenses discussed herein, will provide a rapid or broad-spectrum solution to the junk-patent problem. If these defenses were capable of such a feat, Lemelson would not have collected multiple billions of dollars to date.[17]

Sullivan and Loretto explain the complexity of the Lemelson patents:

"Lemelson's patents contain broadly-worded claims that have been asserted to read on common 'high-tech' products – such as the bar code scanners sold by Symbol Technologies, Inc. – even though many of the patents claim priority, through an extraordinary series of continuation applications, to applications filed as early as the mid-1950s. For example, U.S. Patent No. 4,979,029, issued Dec. 18, 1990, upon an application filed on March 27, 1990, claims priority from Application No. 477,467, which was filed on December 24, 1954. Claim 1 of this patent is directed to '[a] method for inspecting an image field to determine if an [sic] select image phenomenon is present in said image field', and comprises steps such as 'scanning an image field containing at least one optically contrasting image field portion which is detectable with an electro-optical scanning means' and 'generating first electrical signals which vary in accordance with variations in the optical characteristics of the optical field scanned.'"[18]

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[17] Jeffrey D. Sullivan and David Loretto, *Symbol Technologies v. Lemelson, Prosecution Laches, and the Still-Unmet Challenges of Junking 'Junk Patents',* 33 AIPLA Q.J. 285, 317 (2005).

[18] *Id.,* 33 AIPLA Q.J. at 286 n.3.

Wysocki, Jr., explains how Lemelson made his money through patents:

Few people paid much attention to Jerome H. Lemelson until he figured out a way to make $500 million.

For decades, Mr. Lemelson has been a soft-spoken, somewhat-nerdy engineer who doesn't manufacture products and rarely even makes prototypes but who turns out a steady stream of blueprints and drawings and has filed huge applications at the U.S. Patent and Trademark Office. He files and amends and divides his applications. Eventually, sometimes 20 years later, he usually gets a patent. Over the years, the 73-year-old Mr. Lemelson has accumulated nearly 500 U.S. patents, more than anybody alive today. They cut through a wide swath of industry, from automated warehousing to camcorder parts to robotic-vision systems.

But he hasn't just hung the patents on a wall, like vanity plates. Seeking royalties, he has turned the strongest ones into patent-infringement claims-and a fortune.

* * *

In 1992 alone, [Lemelson] collected a total of $100 million from 12 Japanese automotive companies, which decided to settle with him rather than fight him in court over a portfolio of some of his innovations: ”machine vision” and image-processing patents. The claims cover various factory uses ranging from welding robots to vehicle-inspection equipment.

“This is what made him rich,” says Frederick Michaud, an Alexandria, Va., attorney who represented the Japan Automobile manufacturers Association. ” But he's still current, let me tell you.”

These days, Mr. Lemelson is casting a longer shadow than ever. True, he makes huge donations, including funding the annual $500,000 Lemelson-MIT Prize for innovation that will be presented tomorrow night at a gala in Washington.

MUCH CONTROVERSY

But behind the pomp lies controversy. Critics say Mr. Lemelson not only exploits the patent system but manipulates it.

* * *

[Mr. Lemelson] is currently embroiled in a brutal legal battle with Ford Motor Co. Unlike more than 20 other automotive companies, Ford has refused to get a license from him on the machine-vision and image-processing patents. In a filing in federal court in Reno, Nev., it charged that Mr. Lemelson, in an abuse of the system, ”manipulated” the U.S. Patent Office. Ford contended in its suit that Mr. Lemelson ”unreasonably and inexcusably delayed” the processing of his applications to make the patents more valuable and more up-to-date. A Ford lawyer, in testimony before a congressional committee, once compared his patents to ”submarines,” sometimes surfacing decades after they were filed, with claims covering new technology.

In 1995, U.S. Magistrate Judge Phyllis Atkins in Nevada sided with Ford, stating that ”Lemelson's use of continuing applications has been abusive and he should be barred from enforcing his asserted patent rights.” In her report, she also stated that Mr. Lemelson ”designs his claims on top of existing inventions for the purpose of creating infringements.” Mr. Lemelson has appealed, blaming the Patent Office for his delays in filing claims. A federal district judge is expected to rule soon.

* * *

Another battle on the horizon will pit Mr. Lemelson against Ford and more than a dozen secret allies. In dispute are some of his pending patent applications that cover ”flexible manufacturing” techniques. Ford is trying to prevent them from being issued; if the patents are issued, Mr. Lemelson plans to enforce them. Discussing the litigation-Mr. Lemelson estimates the two sides have spent well over $10 million, with no end in sight-he says, ”It's almost, in my opinion, madness.”

Meanwhile, Mr. Lemelson is inspiring a horde of imitators. Firms are springing up whose main business is obtaining patents and, like him, enforcing them by first offering a license and then, if refused, suing. Working with them are individual inventors who have decided that patented ideas, legally enforced, can be more lucrative than manufacturing and marketing.

”I'm not interested in building a company and getting into manufacturing. I focus on new inventions, on new things,” say Charles Freeny Jr., a 65-year-old inventor in Irving, Texas, with a patent covering transmission of digital information over a network. Today, enforcement of Mr. Freeny's rights is in the hands of E-data Corp., a tiny Secaucus, N.J., company with three employees. Its main business is to try to extract royalty payments from alleged infringers.

* * *

A new breed of intellectual-property lawyer has emerged, too. Many seem to be inspired by Mr. Hosier, who pioneered the use of contingency fees in patent cases and whose work for Mr. Lemelson alone has brought him more than $150 million in fees. The lawyer's success – he lives in a 15,000-square-foot house near Aspen, Colo. – has made the field ”a very hot area. It's going crazy,” says Joseph Potenza, a patent attorney in Washington. Between 1991 and 1996, the American Bar Association says, the number of intellectual-property lawyers soared to 14,000 from 9,400.

One Houston company, Litigation Risk Management Inc., is even helping finance inventors' intellectual-property efforts by bringing in Lloyd's of London to finance 80% of the cost of the litigation. Joby Hughes, Litigation Risk's president, says that if the licensing or litigation effort succeeds, the London insurance exchange will get a 25% profit on the money it puts up. Mr. Hughes's company gets a fee for arranging the deal.

A BOOMING FIELD

Companies long active in intellectual-property enforcement say business is strong. One is Refac Technology Development Corp. The New York company buys the rights to patents and licenses them to manufacturers, which pay royalties to both Refac and the inventors. Last year, Refac's net income more than doubled to $4.7 million on revenue of $9.2 million.

The purpose of the U.S. patent system comes into question, however. A patent doesn't require the inventor to go into manufacturing; technically, a patent is a right to exclude somebody else from using your ideas in commercial products, for 20 years from the date of filing. (Before June 1995, patents were valid for 17 years from date of issue. These and other patent revisions remain a hot topic in Congress.)

U.S. Commissioner of Patents and Trademarks Bruce Lehman says he is outraged by ”these people who file patent applications and never, ever, ever go to market with an invention, based on their application. I thought what the patent system was all about was coming here and getting a patent and going to some banker or venture capitalist or something and get money, and then you go out and start a company and put products out on the marketplace. And you go sue the people that infringe on you.”

But to the new intellectual-property players, it is the patent itself that has the economic value. And that has long been Mr. Lemelson's notion.

A native New Yorker, Mr. Lemelson worked for big companies and tried his hand at toy manufacturing. By his own testimony, that venture didn't succeed. Over time, he turned to crafting patents and then to seeking licenses. He often got involved in legal battles. His biggest one in toyland was a 15-year fight with Mattel Inc. over the flexible track in its Hot Wheels toys. In 1989, he won a $71 million patent-infringement judgment, but it was overturned on appeal.

BIG DEAL WITH IBM

In electronics, Mr. Lemelson's big break came in 1980, when International Business Machines Corp. agreed to take a license on a portfolio of his computer patents. ”After the IBM deal, I became a multimillionaire,” he says. ”It didn't put me on easy street because I had so many balls in the air at one time. But it certainly helped a lot.”

An even bigger break came in the mid-1980s, when Mr. Lemelson met Mr. Hosier. In 1989, the already successful patent lawyer put together the ”machine vision” licensing campaign. Mr. Hosier focused his negotiations on 12 Japanese automotive companies, and the talks dragged on through mid-1992. That July, Mr. Lemelson sued four of the companies, Toyota Motor Corp., Nissan Motor Co., Mazda Motor Corp. and Honda Motor Co. Within a month, the Japanese agreed to settle; the 12 companies paid him the $100 million.

At a post-settlement celebration of sorts, in the Brown Palace Hotel in Denver, the Japanese insisted on taking photographs, which show eight grim-looking Japanese surrounding a beaming Mr. Lemelson. He contends that it was a heroic victory, a patriotic act. ”My federal government has made <in taxes> probably over a quarter of a billion dollars on my patents over the years,” he says. ”A good part of it has been foreign money.”

Similar infringement suits followed, against Mitsubishi Electric Corp., against Motorola Inc., against the Big Three Detroit auto makers. Initially, both Mitsubishi and Motorola decided to fight; later, they settled. The suits against General Motors Corp. and Chrysler Corp. were ”dismissed without prejudice.” In effect, any further action against GM or Chrysler is in abeyance until the Ford outcome is known.

WHY THEY SETTLED

By all accounts, the strategy was well-planned and well-executed. Mr. Hosier says the Japanese were more inclined to settle than the Americans. Commissioner Lehman says the Japanese are ”particularly freaked by litigation. And so you start out with them. . . . And, of course, they all pay up, and that establishes a precedent.” After the Japanese settlement, several European auto makers also agreed to take licenses on Mr. Lemelson's patents.

Some who settled say they concluded that Mr. Lemelson had a good case. Others call it an uphill battle to try to persuade a judge or jury that the government had repeatedly made mistakes in issuing him all those patents. With a legal presumption that patents are valid, his opponents say they had the burden of proving the Patent Office had goofed 11 times in a row.

In any event, by 1994, Mr. Lemelson had amassed about $500 million in royalties from his patents. But Ford has held out.

Even as the lawyers haggled over the law, many of the facts in the case were undisputed. In 1954 and 1956, both sides agree, Mr. Lemelson made massive patent filings, which included, for example, many drawings and descriptions of an electronic scanning device. As an object moved down a conveyor belt, a camera would snap a picture of it. Then that image could be compared with a previously stored one. If they matched, a computer controlling the assembly line would let the object pass. If the two images didn't match up, it might be tossed on a reject pile. But because Mr. Lemelson's filings were so extensive and complex, the Patent Office divided up his claims into multiple inventions and initially dealt with only some of them. Thus, for whatever reason, his applications kept dividing and subdividing, amended from time to time with new claims and with new patents. It was as if the 1954 and 1956 filings were the roots of a vast tree. One branch "surfaced" in 1963, another in 1969, and more in the late 1970s, the mid-1980s and the early 1990s. All direct descendants of the mid-1950s filings, they have up-to-date claims covering more recent technology, such as that for bar-coding scanning. The lineage was presented to the court in a color-coded chart produced by Ford. It shows how the mid-1950s applications spawned further applications all through the 1970s and 1980s. One result: a group of four bar-code patents issued in 1990 and 1992, with a total of 182 patent claims, all new and forming the basis of 14 infringement claims against Ford. But because of their 1950s roots, these patents claim the ancient heritage of Mr. Lemelson's old applications and establish precedence over any inventor with a later date.

The entire battle has become numbingly complex, a battle over whether the long stretch between the mid-1950s and the new claims in the 1990s constituted undue delay. Ford says yes. Mr. Lemelson says no. The magistrate judge found for Ford. Another question is whether Mr. Lemelson's original filings-his scanner and camera and picture of images on a conveyer belt-should be considered the concepts of bar-code scanning, and thus Ford's use of bar coding in its factories make it an infringer of his patents. Mr. Lemelson says yes. Ford says no, arguing Mr. Lemelson depicted a fixed scanner (bar-code scanners can be hand-held). "As we said in our lawsuit, if you walk into the Grand Union and show up for work with a 'Lemelson' bar-code scanner, it won't work," quips Jesse Jenner, a lawyer for Ford.

It's impossible to say which side will ultimately prevail. Or whether there will be a settlement. But the clear winners so far are the lawyers. Mr. Lemelson alone employs a small army of them. And Mr. Hosier pretty much thanks himself for

that, noting an old joke: ”One lawyer in town, you're broke. Two lawyers in town, you're rich.”[19]

B. One Decision for Every 600 Patents per Year

Much ado is made of a high rate of invalidity of patents subjected to a post grant patent challenge. In the first instance, it must be recognized that a significant number of cases reach a final decision of invalidity where from an objective viewpoint the patentee had very weak facts and *should* have simply given up or settled the proceeding long *prior* to a final decision: But, the economics of maintaining a patent for one or two additional years until a final invalidity ruling is often worth many *millions* of dollars to the patentee which, by contrast, makes the million or so dollars in legal fees insignificant by comparison. Beyond this artificial inflation of invalidity rates in final dispositions, one must also see that post grant challenges at the PTO are relatively rare:

More than 99 percent of all granted patents each year *avoid* a post grant challenge. Thus, what is not as widely understood outside the patent community is that the Patent Office has scientific and patent legal experts who determine whether to sustain a patent in post grant proceedings; in contrast, the same task in a District Court normally falls to a jury of peers. Thus, a patent challenger at the Patent Office who risks a post grant patent validity challenge on anything but a

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[19] H.R. 400, *The 21st Century Patent Improvement Act of 1997,* 143 Cong. Rec. H1585-01, 1997 WL 182364 (April 16, 1997)(quoting Bernard Wysocki, Jr., *How Patent Lawsuits Make a Quiet Engineer Rich and Controversial,* Wall Street Journal (Apr. 9, 1997)).

"sure" thing is essentially signing a death warrant for any chance to succeed in a District Court defense based on patent validity: Any patent challenge that has survived a proceeding at the Patent Office makes it more difficult to reach the opposite conclusion in a subsequent District Court action. Therefore, patent challenges are rare in post grant proceedings unless the patent challenger has an extremely solid position – or is otherwise desperate, without, for example, sufficient funding to undergo a full blown patent litigation.

The small number of post grant Patent Office challenges is manifested by the fact that there are only roughly 500 written decisions for *all* the post grant proceedings per year (out of an also small average of 1000 total post grant procedures that have commenced but are settled), including inter partes review, covered business method review, and post-grant review.[20]

[20] Jason D. Eisenberg and Robert Greene Sterne, eds., 1 Patent Office Litigation § 15:26, *Statistics* (Jan. 2017 Update)("Based on statistics … updated in August of 2016, the number of petitions filed seeking inter partes review, covered business method review, and post-grant review currently averages 1,000 annually. Of those 1,000 petitions, roughly 50% proceed to a final written decision on the merits. While the appeal rate varies substantially from period to period, one or both parties appeal a final written decision between 50-60 % of the time. This accounts for roughly 250 appeals per year that never existed before the AIA. Of those, the vast majority are appeals pursued by patent owners, approximately 80%. Only about 10% are appeals taken by petitioners alone, and another 10% are cross-appeals. Like the underlying composition of the Board's docket, roughly 72% of the appeals involve electrical, communications, computer, and software technology, 16% involve chemical or biotechnology, and 12% involve mechanical or design technology.

"Post-grant proceedings on appeal are faring roughly as one would expect, based on the historically high affirmance rate of Office decisions. For example, based on all appeals from reexaminations decided between 2011 and 2016, 70% of inter partes reexamination decisions were affirmed by the Federal Circuit (with 53% of those being Rule 36 affirmances) and 94% of ex parte reexamination appeals were affirmed by the Federal Circuit (with 68% of those being Rule 36 affirmances). As of August 15, 2016, the Federal Circuit had decided 134 appeals from AIA post-grant proceedings, affirming 84% of them (with 63% of those being Rule 36 affirmances). The reversal rate was at 8%, as was the remand rate. The Federal Circuit had also

To put this number in perspective a total of nearly 300,000 patents were granted in 2015, slightly more than half of which were of foreign origin.[21]

With roughly 500 decisions per year in post grant procedures compared to a base issuance of roughly 300,000 patents per year, this yields one (1) decision in a post grant proceeding per every 600 patents granted. (If one used as the base the patents open to one form or another of post grant challenge, the number would be closer to about 1 per 6,000 patents in force, counting the seventeen years that some post grant challenges can be instituted.)

One of the leading patent academics in the country, Professor Rochelle Cooper Dreyfuss of New York University Law School, helps put the statistics in perspective:

While … statistics speak loudly about the public's eagerness and ability to use these [PTO] procedures to "weed out" bad patents, it is more difficult to interpret what the numbers mean from a normative standpoint. To some, they suggest that the Board is out of control. As Randall Rader, once chief judge of the Federal Circuit, put it, the judges of the PTAB are "acting as death squads, killing property rights."[109] Or in the words of two bloggers, the PTAB is "where patent claims go

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decided 13 petitions for writ of mandamus taken from post-grant proceedings and denied all of them.").

[21] The total is 298,407, of which 52.8 % were of foreign origin. *See* United States Patent and Trademark Office, *U.S. Patent Statistics Chart, Calendar Years 1963 – 2015*, https://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm, last visited October 21, 2017.

[109] Tony Dutra, *Rader Regrets CLS Bank Impasse, Comments on Latest Patent Reform Bill*, BNA Pat. Trademark & Copyright L. Daily, Oct. 29, 2013.

to die."[110] More temperately, after comparing cancellation rates in IPRs to invalidation rates in court and considering the number of claims cancelled in IPRs that had previously survived ex parte reexamination, [111] Gregory Dolin concluded that it is "too easy to invalidate a duly issued patent" in an IPR. He called the CBM statistics "even more staggering."[112]

But the numbers can be understood in a very different way. Before the PTAB can issue a final written decision cancelling claims, it must decide whether to institute a proceeding. The standard for determining whether to institute, although slightly different for the three procedures, is essentially whether it is more probable than not that at least one challenged claim is unpatentable. Since the preponderance of the evidence standard for determining whether a claim *should* be cancelled is also, essentially, whether it is more probable than not invalid, the high invalidation rate is basically a reflection of the PTAB's ability to forecast correctly how it will decide on at least one claim. Because the panel that decides whether to institute also decides the case on the merits, a strong correlation is to be expected. [113] This is especially so because the institution decisions are far from pro forma: they are often as long as the merits decision, cover the same issues (claim construction is often central), and are as thoughtful and probing of the arguments as the

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[110] Michelle Carniaux & Michael E. Sander, *Claims Can Survive* Inter Partes *and Covered Business Method Review (But Few Do)*, IPR Blog (Apr. 7, 2014), http://interpartesreviewblog.com/claims-can-survive-inter-partes-covered-business-method-review/.

[111] *See* Gregory Dolin, *Dubious Patent Reform*, 56 B.C. L. Rev. 881, 926-27 (2015) (citing John R. Allison & Mark A. Lemley, *Empirical Evidence on the Validity of Litigated Patents*, 26 AIPLA Q.J. 185, 205-06 (1998)); Shawn P. Miller, *Where's the Innovation: An Analysis of the Quantity and Qualities of Anticipated and Obvious Patents*, 18 Va. J.L. & Tech. 1, 6-7 (2013).

[112] Dolin, *supra* note 111, at 926, 930.

[113] The PTO is considering a pilot program in which institution decisions would be made by only one judge; if that judge decides to institute, two new judges would be added to decide the case. *See* Lee, *supra* note 37. [Note 37: 37 C.F.R. § 42.108(a) (2014) ; *id.* § 42.208 (permitting the Board to institute on only some claims and to refuse to consider all asserted grounds for invalidation); *id.* § 42.300; *see also Bank of Am., N.A. v. Intellectual Ventures II LLC*, No. CBM2014-00031 (P.T.A.B. Aug. 18, 2014) (institution decision) (instituting on nine of eighteen claims challenged). The PTAB then granted the patent holder's motion for adverse judgment on all challenged claims.]

decisions on the merits.[114] Admittedly, once the PTAB decides one claim may be invalid, it can entertain challenges to other claims as well. But it need not hear *every* claim the petitioner seeks to cancel. Partial institutions are possible, and in practice, the PTAB screens out claims that appear to be valid at the institution stage. That is, in deciding whether to institute, the PTAB often considers every claim and every ground to determine whether each claim is more likely than not unpatentable on each alleged ground.[115]22

Professor La Belle summarizes the Rader-inspired "death squad" hysteria:

Early studies indicate that patent challengers are enjoying high rates of success with the new [PTO patent challenge] proceedings.[170] In IPRs, petitioners have won complete victories almost two-thirds of the time when pursuing their petitions to a final decision.[171] And even when not securing a total win, petitioners have

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[114] To take two examples, arbitrarily chosen, the institution decision in *SAP America, Inc. v. Versata Development Group, Inc.* was forty-four pages long. No. CBM2012-00001 (P.T.A.B. Jan. 9, 2013) (institution decision). In the same case, the final written decision was thirty-five pages. *Id.* (P.T.A.B. June 11, 2013). The institution decision in *U.S. Bancorp v. Retirement Capital Access Mgmt. Co.* was fifteen pages. No. CBM2013-00014 (P.T.A.B. Sept. 20, 2013) (institution decision). There, the final written decision was twenty-one pages. *Id.* (P.T.A.B. Aug. 22, 2014).

[115] 37 C.F.R. § 42.108(a) (2014) ; *id.* § 42.208 (permitting the Board to institute on only some claims and to refuse to consider all asserted grounds for invalidation); *id.* § 42.300; *see also Bank of Am., N.A. v. Intellectual Ventures II LLC*, No. CBM2014-00031 (P.T.A.B. Aug. 18, 2014) (institution decision) (instituting on nine of eighteen claims challenged). The PTAB then granted the patent holder's motion for adverse judgment on all challenged claims.

22 Rochelle Cooper Dreyfuss, *Giving the Federal Circuit a Run for its Money: Challenging Patents in the PTAB*, 91 Notre Dame L. Rev. 235, 251-52 (2015)(original footnotes included in brackets)(original emphasis).

[170] *See* Brian J. Love & Shawn Ambwani, *Inter Partes Review: An Early Look at the Numbers*, 81 U. Chi. L. Rev. Dialogue 93, 101 (2014) (finding that the PTAB invalidated all instituted IPR claims almost 78% of the time).

[171] *Id.*

managed to persuade the PTAB to institute IPR on at least one challenged claim in eighty-four percent of proceedings.[172]

Based on these high rates of invalidation, critics have referred to the PTAB alternatively as a 'death squad'[173] and a 'killing field.'[174] Former Chief Judge Rader stated at an intellectual property conference that the PTO 'was in tension with itself, with thousand[s] of examiners 'giving birth' to patents and hundreds of judges on the PTAB 'acting as death squads, kind of killing property rights.''[175] A former high-level PTO official similarly criticized the agency for 'creating' and then 'destroying' patents, wondered how long such a 'business model' can last, and warned that 'if the PTAB continues on this path, the raison d'etre of the Patent Office and the entire patent system will be called into question.'[176] [23]

[172] *Id.* at 100. A more recent study finds that the rate at which the PTAB is instituting IPRs has been slowly and consistently declining since 2012. *See* Saurabh Vishnubhakat, Arti K. Rai & Jay P. Kesan, *Strategic Decision Making in Dual PTAB and District Court Proceedings*, 31 Berkeley Tech. L.J. 45, 78, 107 (2016).

[173] Robert Greene Sterne & Gene Quinn, *PTAB Death Squads: Are All Commercially Viable Patents Invalid?*, IPWatchdog.com (Mar. 24, 2014), http://www.ipwatchdog.com/2014/03/24/ptabdeathsquads-are-all-commercially-viable-patents-invalid/id=48642/ (quoting former Fed. Cir. Chief Judge Randall Rader, Comments at the 2013 American Intellectual Property Law Association Annual Meeting (Oct. 25, 2013)).

[174] Erich Spangenberg, *Patent Predictions for 2015*, IPNav: Blog (Dec. 31, 2014), http://www.ipnav.com/blog/erich-spangenbergs-patent-predictions-for-2015/ [https://perma.cc/XsN4-XQRG].

[175] Ryan Davis, *PTAB's "Death Squad" Label Not Totally Off-Base, Chief Says*, Law360 (Aug. 14, 2014, 5:47 PM), http://www.law360.com/articles/567550/ptab-s-death-squadlabelnot-totally-off-base-chief-says [https://perma.cc/7FXK-DCJ6].

[176] Sterne & Quinn, *supra* note 173. While Rob Sterne and Gene Quinn do not identify the "former top USPTO official," I heard John Whealan (former Deputy General Counsel for Intellectual Property Law and Solicitor at the PTO) make these same observations at the Center for American and International Law's 52nd Annual Conference on Intellectual Property Law on November 10, 2014 in Plano, Texas.

[23] Megan M. La Belle, *Public Enforcement Of Patent Law***,** 96 B.U. L. Rev. 1865, 1891-92 (2016)(original footnotes integrated into text in brackets).

C. Maturation of the Patent Bar

As pointed out by Dilger and Lord, "[t]here is evidence … that patent owners are becoming more successful in combating IPR petitions."[24] The early high rate of invalidation in post grant procedures has been attributed by Judge Smith to the selection of weak patents by patent challengers for such proceedings.[25] "The goal of minimizing uncertainty regarding claim scope applies * * * to post-grant reviews * * *."[26]

D. Need for Validity "Police" at the PTO

The need for greater validity "police" remains despite the Rader "death squad" hysteria. This need is explained by Professor La Belle's conclusion that "[i]nvalid patents, even if unenforced, are problematic. They dampen innovation, hamper competition, and harm consumers. Yet no public agency polices patents

[24] Nate Dilger & John Lord, *Evaluating the Effectiveness of the Inter Partes Review Process*, 39-AUG L.A. Law. 16 (July/August 2016).

[25] *Id.*(quoting Sarah Tran, *Policy Tailors and the Patent Office*, 46 U.C. Davis L Rev. 487, 498-99 (2012))("The decrease in granted petitions may also be tied to the type of patents now being challenged, in particular, the overall strength of those patents. The early IPR petitions appeared to focus on the weakest patents, a point that Judge Smith noted during a 2014 meeting of the U.S. Patent and Trademark Office's Patent Public Advisory Committee. Indeed the stated goal of the AIA was to give the Patent Office a 'toolbox' of new proceedings to 'weed out low quality patents ... includ[ing] post-grant review, IPR, supplemental examination, and derivation proceedings, as well as a transitional post-grant review program for certain business methods patents.'").

[26] Manzo, Patent Claim Construction in the Federal Circuit § 1:5, *Additional considerations that complicate patent claim construction* (2017 ed.)(citing *In re Zletz*, 893 F.2d 319, 322 (Fed. Cir. 1989)] ("The issued claims are the measure of the protected right.")(citing, *inter alia*, *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 232 (1942), and *General Electric Co. v. Wabash Appliance Corporation*, 304 U.S. 364, 369 (1938)).

after they are issued. We rely instead on private parties, despite the fact that incentives for private validity challenges are seriously lacking. Even with the passage of the AIA and the creation of new and improved administrative proceedings, it is not clear that substantially more patents--or the right type of patents--are being challenged."[27]

[27] La Belle, *supra*, 96 B.U. L. Rev. at 1928.

V. CASE STUDIES

A. The *Restasis* Case

Under the *Leahy Smith America Invents Act* of 2011, procedures have been tightened up to make it easier for patent challengers to establish the invalidity of patents under Post Grant Review (PGR) and Inter Partes Review (IPR). Literally billions of dollars have been saved by consumers through the effective use of the PGR and IPR review proceedings. Indeed, a former member of the Federal Circuit before his resignation from the bench had dubbed these post grant proceedings as "death squads" for patents.

As an added feature to the *Restasis* case recently decided at the trial level, the patentee has employed a clever (but unsuccessful) trick to block a Patent Office challenge to validity by transferring patent title to the Saint Regis Mohawk Tribe (which then granted Allergan an exclusive license under the patents).

The Restasis scheme is explained by Hiltzik.

> [T]he drug maker sold its Restasis patents to the St. Regis Mohawk Tribe, which promptly granted the company an exclusive license to those same patents and obligingly filed a motion to dismiss the Inter Partes Review. In return, the tribe was paid $13.75 million up front and the promise of $15 million a year in royalties. One wonders if the tribe could have held out for more, since Restasis sales come to $1.5 billion a year, according to Allergan.

In announcing the deal, Allergan executives exuded all the sincerity of made men singing the praises of their *capo di tutti capi*. Allergan claimed it was approached by the tribe with *"*a sophisticated opportunity to strengthen the defense of our Restasis intellectual property," and praised the "thoughtful and enterprising approach" of the native Americans, whose home base is in the rural hinterlands a few miles south of the St. Lawrence River and Canadian border, "to achieve their goals of self-reliance and help them address the most urgent needs in their community."

To [Circuit Judge] Bryson, the deal smelled more as if the deal's real motivation was to "attempt to avoid the IPR proceedings" currently before the patent office "by invoking the Tribe's sovereign immunity."

What Allergan is after, he found, is "the right to continue to enjoy the considerable benefits of the U.S. patent system without accepting the limits that Congress has placed on those benefits." If successful, he said, "Allergan's tactic … could spell the end" of the IPR program, which was an important component of patent reform in 2011. [28]

Hiltzik explains the extreme nature of the Allergan gambit:

In the annals of cynical corporate subterfuges, it would be hard to top the effort by the drugmaker Allergan to fend off a patent challenge by selling its drug rights to a rural New York Indian tribe.

That's saying a lot, given the creativity of corporate lawyers searching for ways to subvert the law. But a federal judge in Texas this week called foul on Allergan's stunt. "In reality," observed Judge William Bryson of Marshall, Texas,[*] Allergan

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[28] Michael Hiltzik, *A judge calls foul on Allergan's attempt to hide its drug patents behind an Indian tribe's sovereignty,* Los Angeles Times (October 19, 2017), http://www.latimes.com/business/hiltzik/la-fi-hiltzik-allergan-tribe-20171019-story.html.

[*] This is incorrect: Circuit Judge Bryson is a resident of the Washington, D.C., area and was sitting as a Visiting Judge in Marshall, Texas.

tried to "purchase — or perhaps more precisely, to rent — the Tribe's sovereign immunity" purely in order to defeat the patent challenge.[29]

Hiltzik further explains that "[t]he St. Regis Mohawk Tribe, which acted as Allergan's patent front, isn't showing any regrets thus far. As recently as Wednesday, the tribe sued Microsoft and Amazon on behalf of a small technology company called SRC Labs, which claims that the big companies are infringing its patents on data processing technologies. SRC's goal in assigning its patents to the tribe was to head off a counter-challenge from Microsoft and Amazon."[30]

B. *Oil States Energy Services* Case

The *Oil States Energy Services* case is scheduled for a merits argument at the Supreme Court just after Thanksgiving, on November 27, 2017, as explained in the *preface.* The petitioner argues that a patent validity challenge through an administrative proceeding is unconstitutional.

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[29] Michael Hiltzik, *A judge calls foul on Allergan's attempt to hide its drug patents behind an Indian tribe's sovereignty,* Los Angeles Times (October 19, 2017), http://www.latimes.com/business/hiltzik/la-fi-hiltzik-allergan-tribe-20171019-story.html.

[30] *Id.*

C. *SAS Institute v. Matal* Case

In *SAS Institute Inc. v. Matal*, in an Inter Partes Review proceeding, the PTO examined only *some* of the claims; here, petitioner questions whether "th[e] Board [must] issue a final written decision as to every claim challenged by the petitioner, or does [the statute] allow that Board to issue a final written decision with respect to the patentability of only some of the patent claims challenged by the petitioner, as the Federal Circuit held?" The case will be argued the same morning as *Oil States Energy*.

Merits decisions in both *Oil States Energy Services* and *SAS Institute Inc. v. Matal* are expected before the Court completes its present Term at the end of June 2018.

D. The *Prozac* Case

1. A $ 34 Billion Stock Price Fall

It is not just the patent challengers who should benefit from PTO proceedings to determine patent validity. Perhaps the most notorious determination of patent invalidity that broke new legal ground is the *Prozac* case. *Eli Lilly & Co. v. Barr Laboratories, Inc.*, 222 F.3d 973, 988 (Fed. Cir. 2000)(Gajarsa, J.), which Professors Burk and Lemley point out was, in their understated fashion, "quite controversial".[31]

[31] Dan L. Burk and Mark A. Lemley, *Inherency*, 47 Wm. & Mary L. Rev. 371, 385 (2005)("*Eli Lilly & Co. v. Barr Laboratories, Inc.*,[251 F.3d 955 (Fed. Cir. 2001),] held that Lilly's own prior patent on a method of treating anxiety with Prozac inherently anticipated its later patent on a method of blocking serotonin uptake, since Prozac operates by inhibiting serotonin uptake. [*Id*.

The Prozac invalidity ruling triggered a one day drop in the value of patentee Eli Lilly's stock to the tune of $ 34 billion dollars.[32]

It is difficult, at best, to rely upon an appellate court to overturn a District Court ruling such as in the *Prozac* case. [33] In her dissent in the *Prozac* case, Judge Newman summarized the holding as follows: "The panel has reached the truly anomalous result of holding invalid for obviousness [the *Prozac* patent], on a theory of obviousness-type double patenting, an invention that was made and

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at 969-70. *** [T]he panel's conclusion that the first Lilly patent was prior art, even though it was filed after the second patent, was quite controversial. See *id*. at 975(Newman, J., dissenting).]")(footnotes integrated into text in brackets).

[32] John R. Allison. Mark A. Lemley, Kimberly A. Moore and R. Derek Trunkey, *Valuable Patents,* 92 Geo. L.J. 435, 474 (2004)(citing M. Patricia Thayer, *Double Patenting Sounds Death Knell for Prozac Patent:* Eli Lilly and Co. v. Barr Laboratories, Inc., *at* http:// www.hewm.com/use/articles/elilly.pdf (last visited May 18, 2004).) ("Eli Lilly's stock fell almost 30% (and over $34 billion) on the day its Prozac patent was held invalid, even though this holding occurred only one year before the patent would otherwise have expired. *See* M. Patricia Thayer, *Double Patenting Sounds Death Knell for Prozac Patent:* Eli Lilly and Co. v. Barr Laboratories, Inc., *at* http:// www.hewm.com/use/articles/elilly.pdf (last visited May 18, 2004).

[33] *Eli Lilly & Co. v. Barr Laboratories, Inc.*, 222 F.3d 973, 988 (Fed. Cir. 2000)(Gajarsa, J.)("[T]he circumstances giving rise to the present case support our conclusion that claim 7 [covering Prozac] is invalid for obviousness-type double patenting. This case arose when [generic manufacturer and patent challenger] Barr filed an ANDA application seeking FDA approval for marketing fluoxetine hydrochloride as an antidepressant, and Lilly responded by suing for infringement of, *inter alia,* claim 7 of the '549 patent. Under the '895 patent, which issued in 1977 and expired in 1994, Lilly possessed the right to exclude others from administering any compound, including fluoxetine hydrochloride, within the class of claimed compounds to treat depression. In effect, under the '895 patent, Lilly had the right to exclude others from engaging in the very conduct for which Barr currently seeks FDA approval. Now, by asserting claim 7 of the '549 patent, Lilly attempts to extend the term of exclusivity it enjoyed under the '895 patent for an additional nine years beyond the statutorily prescribed term. "Effectively extending the patent term, however, is precisely the result that the doctrine of obviousness-type double patenting was created to prevent." [*In re Berg*, 140 F.3d 1428, 1435 (Fed.Cir.1998).]")

applied for nine years before the asserted 'prior art' was filed."[34] Her opinion more completely explains *why* the court was wrong in creating a new ground of double patenting to invalid the *Prozac* patent:

The Federal Circuit, sitting en banc, vacated the panel's prior opinion[invalidating the *Prozac* patent on the ground of double patenting, 222 F.3d 9735 (Fed. Cir. Aug. 9, 2000) (Gajarsa, J.),] and returned the case to the panel for further consideration. The panel now again holds claim 7 of the ′549 (Molloy) patent [for Prozac, assigned to Eli Lilly] invalid for double patenting, but this time it bases that determination on a different patent, the ′213 patent (Stark). The panel now grants summary judgment invalidating claim 7 of the ′549 patent for double patenting with the Stark patent. However, this shift has led the panel into factual and legal areas that were not developed at trial, and into misapplication and misstatement of the law of double patenting. I must, respectfully, dissent.

Obviousness–Type Double Patenting

The judge made law of obviousness-type double patenting was developed to cover the situation where patents are not citable as a reference against each other and therefore can not be examined for compliance with the rule that only one patent is available per invention. Double patenting thus is applied when neither patent is prior art against the other, usually because they have a common priority date. See *General Foods Corp. v. Studiengesellschaft Kohle mbH*, 972 F.2d 1272, 1278–81 (Fed.Cir.1992) (summarizing the criteria for obviousness-type double patenting). As the court explained in *In re Boylan*, 392 F.2d 1017, 1018 n. 1 (CCPA 1968), "it must always be carefully observed that the appellant's patent is not 'prior art' under either section 102 or section 103 of the 1952 Patent Act."

[34] As explained by Circuit Judge Newman in *Eli Lilly & Co. v. Barr Laboratories, Inc.*, 251 F.3d 955, 972-76 (Fed. Cir. 2001)(dissenting from the refusal to reconsider the case en banc).

These fundamental requirements for application of the law of double patenting are not met by the ′549 and Stark patents. The Stark patent was filed nine years after the effective filing date of the ′549 patent; there is no formal relationship between them; the ′549 disclosure was a cited reference against Stark; and they have different inventorships. The panel ignores these routine criteria and the effect they have on a double patenting analysis. Whatever effect the ′549 and Stark patents may have on each other, it is not "double patenting."

The district court had rejected Barr's double patenting arguments after summary judgment proceedings, ruling that:

"Barr's primary contention is that claim 7 of the ′549 patent is invalid for double patenting because it merely sets forth the "scientific explanation" for the subject matter of certain of Lilly's other patents. Barr's summary judgment briefing on this issue is a confusing amalgamation of broad patent law principles that are not clearly applicable to the issues before the Court. In fact, the only case law cited in support of its theory is a dissenting opinion, never adopted thereafter by any court as best we could determine. Even disregarding any limitation on the application of this legal theory to the issues at hand, we observe that Barr's briefs focus extensively on the formulation and restatement of its legal theory to the exclusion of any evidence sufficient to explain or support it. Most notably, Barr has failed to provide any authoritative, reliable scientific opinion to establish that claim 7 of the ′549 patent constitutes merely the later scientific explanation of what has already been claimed in the patents that came before."

*** [T]he panel now *** sua sponte finds double patenting between claim 7 of the ′549 patent and claim 1 of the Stark patent. The ′549 disclosure, in the form of three issued divisional patents, was prior art cited against the Stark patent. Patentability of the Stark claims over this prior art was successfully argued in the PTO. The panel reaches the anomalous conclusion that the earlier filed ′ 549 patent (effective filing date January 10, 1974) is invalid for obviousness-type double patenting with the Stark patent that was filed nine years later (April 8, 1983). Such a result is not available under the laws of 35 U.S.C. § 102 and § 103; neither can it be achieved under the rubric of double patenting.

* * *

Claim 7 of the ′549 Molloy patent:

"The method of * * * [blocking the uptake of monoamines by brain neurons in animals] comprising administering to said animal a monoamine blocking amount of N methyl 3–p–trifluoromethylphenoxy–3—phenylproplyamine [fluoxetine] or a pharmaceutically-acceptable acid addition salt thereof."

Claim 1 of the ′213 Stark patent:

"A method for treating anxiety in a human subject in need of such treatment which comprises the administration to said human of an effective amount of fluoxetine or norfluoxetine or pharmaceutically-acceptable salts thereof."

The panel holds that the later-discovered and later-filed anxiety-treatment use of fluoxetine invalidates the patent on the earlier discovery of monoamine (serotonin) blocking use because the earlier discovery is "inherent" in the later one. That is not a correct statement of either the law of double patenting or the law of inherency. The 1974 invention can not be invalidated based on what was filed and claimed in the 1983 application, even on the panel's incorrect view of the law of inherency as applied to biological inventions.

The district court remarked on the absence of reliable evidence as well as legal precedent to support Barr's proffered theories. The panel, however, finds that "Barr has offered a panoply of evidence to support the recognition of this inherent biological function." Panel op. at 23. I take note that the panel cites only references dated after the ′549 application was filed. These references are not prior art to the ′549 claims. Later discoveries and scientific advances may well elucidate the earlier ones, but that does not retrospectively erase the patentability of the earlier work.

The complex factual issues that have been raised in the record, in connection with the relationship between serotonin uptake and the various pharmaceutical uses of fluoxetine, can not be resolved in favor of Barr and adversely to Lilly on the summary judgment record, for the material facts have been placed squarely at issue. Indeed, the scientific evidence in the record weighs heavily against the panel's findings.

It is highly relevant that the Stark application was examined in light of prior art that included the ′549 Molloy disclosure. While Barr cites cases that established rules with respect to the subsequent patentability of a genus when a species is known, this has no relevance to the question at bar. Further, these rules relate to whether a subsequent invention is patentable, not a prior one. Here, however, it is the first-filed (Molloy) invention that the panel invalidates in view of the later-filed Stark invention. Although the Stark patent issued seven months before the ′549 patent, the panel incorrectly holds that the later-filed but earlier-issued Stark claim renders obvious the ′549 claim of nine years earlier priority. Neither *In re Berg*, 140 F.3d 1428 (Fed.Cir.1998), relied on by the panel, nor any other case, supports such an inverted holding.

When two patents issue with claims that are not patentably distinct, the principle served by the judge made law of double patenting is that because patent protection started with the first patent to issue, it should not extend to the expiration of the second patent to issue. Thus the law of double patenting does not consider the patents as prior art; the law simply requires elimination of the extension of exclusivity by truncating the term of the second patent to issue, to coincide with the term of the first patent to issue.

When the second patent to issue is (as here) the first patent that was filed, an anomaly may arise when there is a valid charge of obviousness-type double patenting. I repeat, that charge is not here available because the first patent that was filed was in fact a reference against the second patent. The panel, ignoring this immutable fact, undertakes an obviousness-type double patenting analysis. When two patents are appropriately considered for obviousness-type double patenting, an anomaly arises, for example, when the claims of patent B are "obvious" in light of the claims of patent A, but the claims of patent A are not obvious in light of the claims of patent B. An illustration is shown in In re Berg, where one patent was directed to a species, and the other to a genus that included the species. A genus is usually not patentable over a species, but a species may, depending on the facts, be patentable over the genus. Judge made law has developed a special and simple test for double patenting in such a situation: the requirement of "cross-reading." By applying the rules of cross-reading, double patenting will not lie, for cases in which the first patent to issue is the second patent that was filed, unless the claims cross read; that is, unless the claims of each patent would have been obvious in view of the claims of the other patent. This simple expedient avoids the analytical trap into which the panel fell.

The panel has reached the truly anomalous result of holding invalid for obviousness, on a theory of obviousness-type double patenting, an invention that was made and applied for nine years before the asserted "prior art" was filed. The panel states that *In re Berg* requires that unless the PTO is solely and exclusively responsible for all delays in issuing the first-filed patent, the patentee can not rely on the fact of its earlier filing. That is not the *Berg* holding. In *Berg* the same inventors filed, on the same day, patent applications whose claims stood in the relationship of genus and species of the same method for preparing an abrasive particle suitable for use in an abrasive composition. When the species application was about to issue, the examiner rejected the genus application on the grounds of obviousness-type double patenting. Berg argued that each application should be evaluated as to whether it represented a patentable advance over the other, a two-way test of cross-reading applied in particular circumstances.

This court stated that the purpose of the two-way test, as it had been developed in our precedent, was "to prevent rejections for obviousness-type double patenting when the applicants filed first for a basic invention and later for ean improvement, but, through no fault of the applicants, the PTO decided the applications in reverse order of filing, rejecting the basic application although it would have been allowed if the applications had been decided in the order of their filing." The Federal Circuit then held that Berg was not entitled to the benefits of the two-way test because he could have included all of the claims in a single application. Neither the facts of Berg nor the law as developed therein applies to the patents here under consideration.

The panel also holds that because Lilly disclaimed the Stark patent before trial, this bars Lilly from disclaiming that portion of the ′549 patent that would have extended beyond the Stark patent's original life. No precedent so holds, and I discern no basis for such a new rule. A terminal disclaimer is a standard response to a charge of double patenting; this remedy need not be withheld, at least in the absence of fraud or bad faith. To deny a patentee the opportunity of simplifying the issues or improving its litigation position is an unnecessary if not a punitive action, unwarranted on this record.

The New Rules of Patentability of Biological Inventions

The panel states that "the natural result of fluoxetine hydrochloride is the inhibition of serotonin uptake," and holds that a discovery of a new and unobvious biological property is unpatentable because it is inherent in the chemical compound. As authority the panel cites a dissenting opinion in *Burroughs Wellcome Co. v. Barr Labs., Inc.*, 40 F.3d 1223, 1233 (Fed.Cir.1994) (Lourie, J. dissenting in part), the dissent suggesting that a patent to a method which "is an inherent, inevitable result of the practice" of another method patent constitutes same-invention double patenting. Thus the panel holds the ′549 claim to serotonin inhibition to be invalid as the natural and inherent result of the Stark treatment for relief of anxiety. However, every biological property is a natural and inherent result of the chemical structure from which it arises, whether or not it has been discovered. To negate the patentability of a discovery of biological activity because it is "the natural result" of the chemical compound can have powerful consequences for the patentability of biological inventions. The narrow facts of Burroughs Wellcome and the dissenting view therein do not warrant the new rule now adopted.

The panel also states that "there is not sufficient evidence on which a jury could base a finding that fluoxetine hydrochloride does not inhibit the uptake of serotonin." Indeed, it is far from clear what could be proved, as well as what must be proved, on the panel's theory of double patenting, for the many scientific articles cited in the record show the complexity of the mechanism of action of fluoxetine. However, the panel's ruling that Lilly would have to prove that serotonin inhibition does not occur on treatment with fluoxetine, in order to avoid double patenting invalidity of its claim for serotonin inhibition on treatment with fluoxetine, will surely add confusion and uncertainty to patent practice.

In this period of unprecedented development of patent-supported biological advance, the nation needs a stable and comprehensible patent law, lest this court falter in its leading role in implementing the law's fundamental purposes.[35]

2. Unpredictability in the Judicial System

As seen from the *Prozac* case, it is not just the patent challengers who should benefit from PTO proceedings to determine patent validity. Perhaps the most notorious determination of patent invalidity in a trial court is the *Prozac* case which Professors Burk and Lemley point out was, in their understated fashion, "quite controversial".[36]

[35] *Eli Lilly & Co. v. Barr Laboratories*, 251 F.3d at 972-76 (Newman, J., dissenting from the refusal to reconsider the case en banc)(bold emphasis added)(footnote omitted).

[36] Dan L. Burk and Mark A. Lemley, *Inherency,* 47 Wm. & Mary L. Rev. 371, 385 (2005)("*Eli Lilly & Co. v. Barr Laboratories, Inc.*,[251 F.3d 955 (Fed. Cir. 2001),] held that Lilly's own prior patent on a method of treating anxiety with Prozac inherently anticipated its later patent on a method of blocking serotonin uptake, since Prozac operates by inhibiting serotonin uptake. [*Id*. at 969-70. *** [T]he panel's conclusion that the first Lilly patent was prior art, even though it was filed after the second patent, was quite controversial. See *id*. at 975(Newman, J., dissenting).]")(footnotes integrated into text in brackets).

The Prozac invalidity ruling triggered a one day drop in the value of patentee Eli Lilly's stock to the tune of $ 34 billion dollars.[37] It is difficult, at best, to rely upon an appellate court to overturn a District Court ruling such as in the *Prozac* case. [38]

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[37] John R. Allison. Mark A. Lemley, Kimberly A. Moore and R. Derek Trunkey, *Valuable Patents,* 92 Geo. L.J. 435, 474 (204)(citing M. Patricia Thayer, *Double Patenting Sounds Death Knell for Prozac Patent:* Eli Lilly and Co. v. Barr Laboratories, Inc., *at* http:// www.hewm.com/use/articles/elilly.pdf (last visited May 18, 2004).) ("Eli Lilly's stock fell almost 30% (and over $34 billion) on the day its Prozac patent was held invalid, even though this holding occurred only one year before the patent would otherwise have expired. *See* M. Patricia Thayer, *Double Patenting Sounds Death Knell for Prozac Patent:* Eli Lilly and Co. v. Barr Laboratories, Inc., *at* http:// www.hewm.com/use/articles/elilly.pdf (last visited May 18, 2004).

[38] *Eli Lilly & Co. v. Barr Laboratories, Inc.*, 222 F.3d 973, 988 (Fed. Cir. 2000)(Gajarsa, J.)("[T]he circumstances giving rise to the present case support our conclusion that claim 7 [covering Prozac] is invalid for obviousness-type double patenting. This case arose when [generic manufacturer and patent challenger] Barr filed an ANDA application seeking FDA approval for marketing fluoxetine hydrochloride as an antidepressant, and Lilly responded by suing for infringement of, *inter alia,* claim 7 of the '549 patent. Under the '895 patent, which issued in 1977 and expired in 1994, Lilly possessed the right to exclude others from administering any compound, including fluoxetine hydrochloride, within the class of claimed compounds to treat depression. In effect, under the '895 patent, Lilly had the right to exclude others from engaging in the very conduct for which Barr currently seeks FDA approval. Now, by asserting claim 7 of the '549 patent, Lilly attempts to extend the term of exclusivity it enjoyed under the '895 patent for an additional nine years beyond the statutorily prescribed term. "Effectively extending the patent term, however, is precisely the result that the doctrine of obviousness-type double patenting was created to prevent." [*In re Berg*, 140 F.3d 1428, 1435 (Fed.Cir.1998).]")

3. Broad PTO Interpretation of *Lilly v. Barr*

The Patent Office in its *Manual of Patent Examining Procedure* cites *Eli Lilly & Co. v. Barr Labs., Inc.*, 251 F.3d 955 (Fed. Cir. 2001), as basis for the proposition that when "any invention claimed in [a commonly owned] application [is] *** an obvious variation of[ ] an invention claimed in the patent" then "a nonstatutory double patenting rejection may be appropriate *** when the issuance of a second patent would provide unjustified extension of the term of the right to exclude granted by a patent."[39]

The *Manual* interpretation of *Eli Lilly v. Barr Labs.* is followed *sub silentio* in a series of cases from the Patent Trial and Appeals Board:

[39] MPEP § 804, *Definition of Double Patenting* [R-07](October 2015)]
("A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg,* 140 F.3d 1428 (Fed. Cir. 1998); *In re Goodman,* 11 F.3d 1046 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887 (Fed. Cir. 1985). In determining whether a nonstatutory basis exists for a double patenting rejection, the first question to be asked is: is any invention claimed in the application anticipated by, or an obvious variation of, an invention claimed in the patent? If the answer is yes, then a nonstatutory double patenting rejection may be appropriate. Nonstatutory double patenting requires rejection of an application claim when the claimed subject matter is not patentably distinct from the subject matter claimed in a commonly owned patent, or a non-commonly owned patent but subject to a joint research agreement as set forth in 35 U.S.C. 102(c) or pre-AIA 35 U.S.C. 103(c)(2) and (3), when the issuance of a second patent would provide unjustified extension of the term of the right to exclude granted by a patent. See *Eli Lilly & Co. v. Barr Labs., Inc.*, 251 F.3d 955 (Fed. Cir. 2001); *Ex parte Davis,* 56 USPQ2d 1434, 1435-36 (Bd. Pat. App. & Inter. 2000).").

In the *Hong-Zhu* case, Judge D.Z. Newman quotes with approval from *Eli Lilly v. Barr Labs.*: "'A later claim that is not patentably distinct from,' i.e., 'is obvious over[ ] or anticipated by,' an earlier claim is invalid for obviousness-type double patenting."[40] The opinion of Judge R.J. Smith in the *Hyde* case emphasizes the focus of the Board not on the date of the reference patent cited for double patenting but instead deals with double patenting keyed to "an earlier patent claim". Thus, as stated by Judge R.J. Smith in the *Hyde* case,[41] "[o]bviousness-type double patenting prohibits the issuance of claims in a second patent that are 'not patentably distinct from the claims of the first patent.' *In re Longi*, 759 F.2d 887, 892 (Fed. Cir. 1985). '

A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or anticipated by, the earlier claim.' *Eli Lilly & Co. v. Barr Labs., Inc.*, 251 F.3d 955, 968 (Fed. Cir. 2001)."

[40] *Ex Parte Hong Zhu*, 2016 WL 3357335, slip op. at 6 (Patent Tr. & App. Bd. 2016)(D.Z. Newman, APJ)(quoting *Sun Pharm. Indus., Ltd. v. Eli Lilly & Co.*, 611 F.3d 1381, 1385 (Fed. Cir. 2010)(alteration in original),(quoting *Eli Lilly and Co. v. Barr Labs., Inc.*, 251 F.3d 955, 968 (Fed. Cir. 2001)).

[41] *Ex parte Hyde*, 2016 WL 5234733, slip op. at 3 (Patent Tr. & App. Bd. 2016)(R.J. Smith, APJ)(citations omitted in the original opinion).

More recently, Judge Smith in the *Deluca* case focused once again on the patentable distinctness of claims: "Obviousness-type double patenting prohibits the issuance of claims in a second patent that are 'not patentably distinct from the claims of the first patent.' *In re Longi*, 759 F.2d 887, 892 (Fed. Cir. 1985) (citations omitted). An obviousness-type double patenting analysis is generally analogous to an obviousness analysis under 35 U.S.C. § 103. *See, e.g., Abbvie Inc. v. Mathilda and Terence Kennedy Institute of Rheumatology Trust*, 764 F.3d 1366, 1378-79 (Fed. Cir. 2014) (citing cases). However, resolution of a double patenting analysis is based on the claims at issue and the claims of the reference patent. *See Eli Lilly & Co. v. Barr Labs., Inc.*, 251 F.3d 955, 968 (Fed. Cir. 2001) ('A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or anticipated by, the earlier claim.') (citations omitted)."[42]

In the *Cooper* case, Judge Wilson followed *Eli Lilly v. Barr Labs.* by focusing upon extension of term for a double patenting rejection, as opposed to whether a reference patent is prior art:

[42] *Ex parte Deluca*, 2017 WL 2061608, slip op. a 4 (Patent Tr. & App. Bd. 2017)(R.J. Smith, APJ).

The judicial doctrine of obviousness-type double patenting precludes an applicant from extending the term of protection for a patented invention by claiming an obvious variant of the patented invention in a subsequent patent application. *See In re Longi*, 759 F.2d 889, 892 (Fed. Cir. 1985). Generally, an obviousness-type double patenting analysis entails two steps. First, the claim in the earlier patent and the claim in the pending application are construed to determine the differences between them. Second, a determination is made whether the differences in subject matter between the two claims render the claims patentably distinct. *See, e.g., Eli Lilly & Co. v. Barr Labs., Inc.*, 251 F.3d 955, 968 (Fed. Cir. 2001). When considering whether the invention defined in a claim of an application would have been an obvious variation of the invention defined in the claim of a patent or copending application, the disclosure of the patent or copending application may not be used as prior art. *General Foods Corp. v. Studiengesellschaft Kohle mbH*, 972 F.2d 1272, 1279 (Fed. Cir. 1992).[43]

Judge Flax in the *Cao* case focuses upon a determination "whether the claims are patentably distinct":

"Obviousness-type double patenting entails a two-step analysis. First, the allegedly conflicting claims are construed and, second, the difference(s) between the claims are considered to determine whether the claims are patentably distinct. *See Eli Lilly & Co. v. Barr Labs., Inc.*, 251 F.3d 955, 968 (Fed. Cir. 2001). "A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or anticipated by, the earlier claim." *Id.* Here, as we noted above, Appellants' claims recite subject matter not recited in Chou's claims, thus, the scope of the respective claims is not the same. We find the aforementioned elements of Appellants' claims not recited by Chou's claims would not have been obvious in view of the claims of Chou."[44]

[43] *Ex parte Cooper*, 2017 WL 2061524, slip op. at 2 (Patent Tr. & App. Bd. 2017)(Wilson, APJ)(emphasis added).

[44] *Ex parte Cao*, 2017 WL 1177254, slip op. at 7 (Patent Tr. & App. Bd. 2017)(Flax, APJ).

4. PTO Invalidity Decisions Keyed to Technical Issues

As pointed out in *Herschler,* citing *Ruscetta* and *Lukach*, "[i]t is now well settled law that disclosure of a species is insufficient to provide descriptive support for a generic or sub-generic claim[.]"[45] That a highly technical issue is more likely to succeed at the PTO versus in the court to deny patentability or validity is manifested by the *Ruscetta* line of cases, as prominently featured in the *Lukach* case.

It is important to understand that technically-focused case law plays better at the PTAB than it does in the courts. For example, a search of case law beginning with January 1, 2010, showed two (2) Federal Circuit cases citing *Lukach* but in the same period of time there were ninety-seven (97) PTAB cases citing the same case. The same search without any date restrictions showed eight (8) Federal Circuit cases but one hundred ninety two (192) Board decisions.[46]

[45] *In re Herschler,* 591 F.2d 693, 696 (CCPA 1979)(citing *In re Ruscetta,* 255 F.2d 687 (CCPA 1958), *In re Lukach,* 442 F.2d 967 (CCPA 1971); *In re Smith,* 458 F.2d 1389 (CCPA 1972)).

[46] The search was conducted on October 24, 2017 on Westlaw, for decisions of the PTAB for ["re lukach" and DA(aft 1/1/2010)], for *all* Federal Cases: There were only two (2) cases citing *Lukach* but ninety-seven (97) Board decisions (including *ex parte* appeals). A search without date restrictions shows a total of eight (8) published Federal Circuit opinions citing *Lukach,* while a search for Board opinions citing *Lukach* yields one hundred ninety two (192) decisions.

It is important at the Board to cite *recent* case law, particularly where a leading case is relatively old. Thus, for example, the underlying principle of *Lukach* may be traced to the 1958 *Ruscetta* case where a search without date restrictions shows thirteen (13) PTO decisions citing *Ruscetta*, while a total of fourteen (14) Federal Circuit and CCPA opinions cite to *Ruscetta*.

VI. TRUMPING THE BROADEST REASONABLE INTERPRETION

Patent applicants have often complained about the "broadest reasonable interpretation" that is given to a claim terminology during litigation.

Enough!

It is within the power of the patent draftsman to provide a *Summary of the Invention* as a key section in his patent application, and in that section provide a *specific definition* for any term where the patentee does not want a broader judicial interpretation than that definition.

As explained elsewhere:

The Supreme Court has affirmed the Federal Circuit view "that the broadest reasonable interpretation standard in IPRs 'was properly adopted by PTO regulation.'" *In re Cuozzo Speed Techs., LLC*, 778 F.3d 1271, 1282 (Fed. Cir.2015), *aff'd sub nom Cuozzo Speed Technologies, LLC v. Lee*, 136 S.Ct. 2131 (2016).

In addition to affirming the right of the Patent Office to establish the "broadest reasonable interpretation standard", the Supreme Court in *Cuozzo Speed* added its imprimatur as to a policy rationale to support this standard:

"[T]he regulation [setting forth the 'broadest reasonable interpretation' standard of claim interpretation] represents a reasonable exercise of the rulemaking authority that Congress delegated to the Patent Office. For one thing, construing a patent claim according to its broadest reasonable construction helps to protect the public. A reasonable, yet unlawfully broad claim might discourage the use of the invention by a member of the public. Because an examiner's [ ] use of the broadest reasonable construction standard increases the possibility that the examiner will find the claim too broad (and deny it), use of that standard encourages the applicant to draft narrowly. This helps ensure precision while avoiding overly broad claims,

and thereby helps prevent a patent from tying up too much knowledge, while helping members of the public draw useful information from the disclosed invention and better understand the lawful limits of the claim. See § 112(a); *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S.Ct. 2120, 2129 (2014); see also *In re Yamamoto*, 740 F.2d 1569, 1571 (Fed. Cir.1984).***"[47]

As stated in *Schriber-Schroth,* it is axiomatic that claims are not to be read *in vacuo* but "are always to be read or interpreted in light of its specifications."[48]

As explained in the *Sneed* case, "[i]t is axiomatic that, in proceedings before the PTO, claims in an application are to be given their broadest reasonable interpretation *consistent with the specification*, *In re Prater*, 415 F.2d 1393, 1404 (CCPA 1969), and that claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Johnson*, 558 F.2d 1008 1016 (CCPA 1977)." [49]

The *Sneed* case underpins a more recent explanation in *Suitco Surface* of the rule that the scope of claims in Patent Office proceedings must be 'consistent with the specification': 'Although the PTO emphasizes that it was required to give all 'claims their broadest reasonable construction' ***, this court has instructed that any such construction be 'consistent with the specification, . . . and that claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art.' *In re Bond*, 910 F.2d 831, 833 (Fed.Cir.1990) (quoting *In re Sneed*, 710 F.2d 1544, 1548 (Fed.Cir.1983)) (emphasis added [by the court]). 'The PTO's construction here, though certainly broad, is unreasonably broad. *** [C]laims should always be read in light of the specification and teachings in the underlying patent. See *Schriber-Schroth Co. v. Cleveland Trust Co.*, 311 U.S. 211, 217 (1940)('The claims of a patent are always to be read or interpreted in light of its specifications.')."[50]

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[47] *Cuozzo Speed Technologies, LLC v. Lee*, 136 S.Ct. 2131, 2144-45 (2016).

[48] *Schriber-Schroth Co. v. Cleveland Trust Co.*, 311 U.S. 211, 217 (1940).

[49] *In re Sneed*, 710 F.2d 1544, 1548 (Fed.Cir.1983)(emphasis added); see also *In re Bond*, 910 F.2d 831, 833 (Fed.Cir.1990) (quoting *Sneed*).

Sneed was a reiteration of basic principles of claim construction as being keyed to the specification. As explained by Circuit Judge Bryson in the *en banc Phillips* case:

"Shortly after the creation of this court, Judge Rich wrote that '[t]he descriptive part of the specification aids in ascertaining the scope and meaning of the claims inasmuch as the words of the claims must be based on the description. The specification is, thus, the primary basis for construing the claims.' *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 452 (Fed.Cir.1985). ***

"That principle has a long pedigree in Supreme Court decisions as well. *See Hogg v. Emerson,* 47 U.S. (6 How.) 437, 482 (1848) (the specification is a 'component part of the patent' and 'is as much to be considered with the [letters patent] in construing them, as any paper referred to in a deed or other contract'); *Bates v. Coe,* 98 U.S. 31, 38 (1878) ('in case of doubt or ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and meaning of the language employed in the claims'); *White v. Dunbar,* 119 U.S. 47, 51 (1886) (specification is appropriately resorted to 'for the purpose of better understanding the meaning of the claim'); *Schriber-Schroth Co. v. Cleveland Trust Co*., 311 U.S. 211, 217 (1940) ('The claims of a patent are always to be read or interpreted in light of its specifications.'); *United States v. Adams,* 383 U.S. 39, 49 (1966) ('[I]t is fundamental that claims are to be construed in the light of the specifications and both are to be read with a view to ascertaining the invention.')." [*Phillips v. AWH Corp*., 415 F.3d 1303, 1315-16 (Fed. Cir. 2005)(en banc)(Bryson, J.).].[51]

[50] *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir. 2010).
[51] Wegner, FIRST TO FILE PATENT DRAFTING: A PRACTITIONER'S GUIDE, § 6:7, *Interpretation "In Light of [the] Specifications"* (Thomson Reuters 2017)(footnotes renumbered to fit within the format of the current paper.)

Perhaps the best way to make sure that a definition of a claim term is given ultimate weight in the determination of the scope of protection is to include the definition of the term in the *Summary of he Invention*:

On the one hand, a "glossary" or "definition" of every term in a patent should *not* be a part of the drafting strategy. But, for an element of the claim at the point of novelty to distinguish over the prior art, here, the *Summary of the Invention* immediately after the first reference to the element should contain a *specific definition* of that element. For example:

"As the 'Framus' of the invention is meant…"

Without the specific definition, the patent challenger at the PTAB will attempt to show that the "Framus" has a broader meaning beyond what the applicant has intended and, if "reasonable", that definition should control in proceedings at the PTAB. If this broader definition moves the claim closer to the prior art, the equation is shifted in favor of the patent challenger.

While the PTAB operates under the "broadest reasonable interpretation" rule of claim construction, it is clear that a *specific definition* trumps this general rule of construction: "[P]atentees can act as their own lexicographers if they ''clearly set forth a definition of the disputed claim term' other than its plain and ordinary meaning.'" *Vasudevan Software, Inc. v. Microstrategy, Inc.*, 782 F.3d 671 (Fed. Cir., 2015)(Linn, J.)(quoting *Thorner v. Sony Computer Entm't Am., LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012), quoting *CCS Fitness, Inc. v. Brunswick Corp*., 288 F.3d 1359, 1366 (Fed. Cir. 2002)). *See also In re Bass*, 314 F.3d 575, 577 (Fed.Cir.2002)("[T]he PTO must apply the broadest reasonable meaning to the claim language, taking into account any definitions presented in the specification."); *In re American Academy of Science Tech Center*, 367 F.3d 1359, 1364 (Fed. Cir. 2004)(quoting *Bass*).

Thus, where an element is given a *specific definition* in the *Summary of the Invention* this should bar a Patent Office interpretation of that element broader than this definition. As explained in *Microsoft v. Proxyconn:*

"In *Cuozzo*, this court held that the broadest reasonable interpretation standard in IPRs 'was properly adopted by PTO regulation.' [*In re Cuozzo Speed Techs., LLC*, 778 F.3d 1271, 1282 (Fed. Cir.2015), *aff'd sub nom Cuozzo Speed Technologies, LLC v. Lee*, 136 S.Ct. 2131 (2016)]. * * *

"That is not to say, however, that the Board may construe claims during IPR so broadly that its constructions are *unreasonable* under general claim construction principles. *** Rather, '*claims should always be read in light of the specification* and teachings in the underlying patent.' [*In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir. 2010)]. * * * Even under the broadest reasonable interpretation, *the Board's construction 'cannot be divorced from the specification* and the record evidence,' *In re NTP, Inc*., 654 F.3d 1279, 1288 (Fed. Cir. 2011), and 'must be consistent with the one that those skilled in the art would reach,' *In re Cortright*, 165 F.3d 1353, 1358 (Fed. Cir. 1999). A construction that is 'unreasonably broad' and which does not 'reasonably reflect the plain language and disclosure' will not pass muster. *Suitco*, 603 F.3d at 1260."[52]

Thus, the patentee who includes a *definition* of claim elements in the *Summary of the Invention* avoids a broader interpretation of such elements. As explained in *SAS Institute, Inc. v. ComplementSoft, LLC*., ___ F.3d __, __. 2016 WL 3213103 (Fed. Cir. 2016)(Stoll, J.):

[52] *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292 (Fed. Cir. 2015)(Prost, C.J.).

"[The patent challenger] argues that because the Board's construction is narrow, it cannot be the broadest reasonable interpretation of the claim term. This is not so. While we have endorsed the Board's use of the broadest reasonable interpretation standard in IPR proceedings, we also take care to not read 'reasonable' out of the standard. This is to say that '[e]ven under the broadest reasonable interpretation, the Board's construction cannot be divorced from the specification and the record evidence, and must be consistent with the one that those skilled in the art would reach.' [*Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015) (internal quotation marks omitted) (first quoting *In re NTP, Inc.*, 654 F.3d 1279, 1288 (Fed. Cir. 2011); and then quoting *In re Cortright*, 165 F.3d 1353, 1358 (Fed. Cir. 1999))."

The "broadest reasonable interpretation" rule of claim construction does not mean an *in vacuo* determination of the meaning of the claim wording, but, rather, that other factors are involved, particularly that claims should be given "broadest reasonable interpretation *consistent with the specification.*"[53] That the Patent Office should honor a definition in the specification to cabin an otherwise broad interpretation of a claim element is made clear by the *Manual of Patent Examining Procedure*:

[53]*In re Bond*, 910 F2d 831, 833 (Fed. Cir. 1990)(quoting *In re Sneed,* 710 F.2d 1544, 1548 (Fed.Cir.1983) (citations omitted)("It is axiomatic that, in proceedings before the PTO, claims in an application are to be given their *broadest reasonable interpretation consistent with the specification,* [ ] and that claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art.")(emphasis added); *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000)(Bryson, J.)(citing *In re Graves,* 69 F.3d 1147, 1152 (Fed.Cir.1995); *In re Etter,* 756 F.2d 852, 858, (Fed.Cir.1985) (en banc))("[D]uring examination proceedings, claims are given their *broadest reasonable interpretation consistent with the specification.*")(emphasis added); *In re Montgomery*, 677 F.3d 1375, 1379 (Fed. Cir. 2012)(Dyk, J.)(quoting *In re Am. Acad. of Sci. Tech Ctr.,* 367 F.3d 1359, 1364 (Fed.Cir.2004), quoting *In re Bond,* 910 F.2d 831, 833 (Fed.Cir.1990)) ("During examination, 'claims ... are to be given their *broadest reasonable interpretation consistent with the specification,* and ... claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art.'");
PPC Broadband, Inc. v. Corning Optical Communication RF, LLC, 815 F.3d 747, 751 (Fed. Cir. 2016) (citing *In re Cuozzo Speed Techs., LLC,* 793 F.3d 1268, 1279 (Fed.Cir.2015), *aff'd sub nom Cuozzo Speed Technologies, LLC v. Lee*, 136 S.Ct. 2131 (2016)).("In IPR proceedings, the Board gives claims *their broadest reasonable interpretation consistent with the specification*.")(emphasis added).

"The broadest reasonable interpretation does not mean the broadest possible interpretation. Rather, the meaning given to a claim term must be consistent with the ordinary and customary meaning of the term (*unless the term has been given a special definition in the specification), and must be consistent with the use of the claim term in the specification and drawings*."[54]

The Patent Office in the ensuing section of the *Manual* underscores the point that to trump the broadest reasonable interpretation rule there must be a clear definition of an alternate meaning set forth in the specification:

"* * * Under a broadest reasonable interpretation, words of the claim must be given their plain meaning, *unless such meaning is inconsistent with the specification*. *** [T]he best source for determining the meaning of a claim term is the specification – *the greatest clarity is obtained when the specification serves as a glossary for the claim terms*. * * *

"The presumption that a term is given its ordinary and customary meaning may be rebutted by the applicant by *clearly setting forth a different definition of the term* in the specification. *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997) (the USPTO looks to the ordinary use of the claim terms taking into account definitions or other 'enlightenment' contained in the written description)[.] *When the specification sets a clear path to the claim language, the scope of the claims is more easily determined and the public notice function of the claims is best served.*

* * *

"[T]he best source for determining the meaning of a claim term is the specification – *the greatest clarity is obtained when the specification serves as a glossary for the claim terms.* See, e.g., *In re Abbott Diabetes Care Inc.*, 696 F.3d 1142, 1149-50 (Fed. Cir. 2012) (construing the term 'electrochemical sensor' as 'devoid of external connection cables or wires to connect to a sensor control unit' to be consistent with 'the language of the claims and the specification'); *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260-61 (Fed. Cir. 2010) (construing the term 'material for finishing the top surface of the floor' to mean 'a clear, uniform layer

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[54]MPEP § 2111, *Claim Interpretation; Broadest Reasonable Interpretation* (R-07)(2015)(emphasis added).

on the top surface of a floor that is the final treatment or coating of a surface' to be consistent with 'the express language of the claim and the specification'); *Vitronics Corp. v. Conceptronic Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996) (construing the term 'solder reflow temperature' to mean 'peak reflow temperature' of solder rather than the 'liquidus temperature' of solder in order to remain consistent with the specification).

* * *

"The only exceptions to giving the words in a claim their ordinary and customary meaning in the art are (1) *when the applicant acts as his own lexicographer*; and (2) when the applicant disavows or disclaims the full scope of a claim term in the specification. To act as his own lexicographer, *the applicant must clearly set forth a special definition of a claim term in the specification* that differs from the plain and ordinary meaning it would otherwise possess. *** In both of these cases, 'the inventor's intention, as expressed in the specification, is regarded as dispositive.' *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (en banc). See also *Starhome GmbH v. AT&T Mobility LLC*, 743 F.3d 849, 857 (Fed. Cir. 2014) (holding that the term 'gateway' should be given its ordinary and customary meaning of 'a connection between different networks' because nothing in the specification indicated a clear intent to depart from that ordinary meaning)[.]

* * *

"An applicant is entitled to be his or her own lexicographer and may rebut the presumption that claim terms are to be given their ordinary and customary meaning by clearly setting forth a definition of the term that is different from its ordinary and customary meaning(s) in the specification at the time of filing. See *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (holding that an inventor may define specific terms used to describe invention, but must do so 'with reasonable clarity, deliberateness, and precision' and, if done, *must ''set out his uncommon definition in some manner within the patent disclosure' so as to give one of ordinary skill in the art notice of the change'* in meaning) (quoting *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1387-88 (Fed. Cir. 1992)).

"Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim. *Toro Co. v. White Consolidated Industries Inc.*, 199 F.3d 1295, 1301 (Fed. Cir. 1999) (meaning of words used in a claim is not construed in a 'lexicographic vacuum, but in the context of the specification and drawings'). ***

"However, it is important to note that any special meaning assigned to a term 'must be sufficiently clear in the specification that any departure from common usage would be so understood by a person of experience in the field of the invention.' *Multiform Desiccants Inc. v. Medzam Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998). See also *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357 (Fed. Cir. 1999) and MPEP § 2173.05(a).

* * *

"If the specification does not provide a special definition for the claim term, the examiner should apply the ordinary and customary meaning to the claim term. If the specification provides a special definition for the claim term, the examiner should use the special definition. However, because there is a presumption that claim terms have their ordinary and customary meaning and *the specification must provide a clear and intentional use of a special definition for the claim term to be treated as having a special definition*, an Office action should acknowledge and identify the special definition in this situation." [MPEP § 2111.01, *Plain Meaning* (R-07)(2015)(emphasis added).][55]

[55] Wegner, FIRST TO FILE PATENT DRAFTING: A PRACTITIONER'S GUIDE, § 6:8, *Summary of the Invention* Definitions to Cabin the "Broadest Reasonable Interpretation" (Thomson Reuters 2017).

Thus, the *Summary of the Invention* may advantageously include a *definition* of a term at the point of novelty in order to cabin an otherwise "broadest reasonable interpretation".[56] If there *is* such a *specific* definition in the *Summary of the Invention* at the point of novelty, the definition should cabin the scope of the claim to that definition for purposes of establishing nonobviousness of the invention.[57]

[56] *In re American Academy of Science Tech Center*, 367 F.3d 1359, 1364 (Fed. Cir. 2004)(Bryson, J.)("During examination, 'claims ... are to be given their broadest reasonable interpretation consistent with the specification, and ... claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art.' *In re Bond*, 910 F.2d 831, 833 (Fed.Cir.1990); *accord* [*In re Bass*, 314 F.3d 575, 577 (Fed.Cir.2002)] ('[T]he PTO must apply the broadest reasonable meaning to the claim language, taking into account any definitions presented in the specification.'); *In re Cortright*, 165 F.3d 1353, 1358 (Fed.Cir.1999) ('Although the PTO must give claims their broadest reasonable interpretation, this interpretation must be consistent with the one that those skilled in the art would reach.')[.]").

[57] *In re Trans Texas Holdings Corp.*, 498 F.3d 1290, 1298 (Fed. Cir. 2007)(Dyk, J.)("Claims are given 'their broadest reasonable interpretation, consistent with the specification, in reexamination proceedings.' *In re Yamamoto*, 740 F.2d 1569, 1571 (Fed.Cir.1984). The term 'responsive to the rate of inflation' is defined in the specification as 'mean[ing] directly responsive to a market indicator of prior actual inflation and it is not meant to include the market's expectation of future inflation.' As the Board noted, the specification's definition only requires that the inflation adjustment be 'directly responsive' to a market indicator of inflation. There is nothing in the specification or the prosecution history that requires an immediate inflation-adjustment every time the rate of inflation increases.")(record citation omitted).

Conversely, if a term at the point of novelty is *not* restricted by a specific definition then the "broadest reasonable interpretation" rule goes unchecked, perhaps to the detriment of the patentee where a narrow interpretation is necessary to sustain validity of the patent.[58]

[58] *In re Buszard*, 504 F.3d 1364, 1369 (Fed. Cir. 2007)(Prost, J., dissenting)("Because the Board must give claim language its broadest reasonable interpretation, I would affirm the Board's construction of 'flexible polyurethane foam reaction mixture.' Of course, had Buszard's specification provided a definition of the term 'flexible polyurethane foam reaction mixture,' the Board would have been required to give that term the definition recited in the specification.")

VII. PRE-EXAMINATION PREISSUANCE SUBMISSIONS

To facilitate earlier action on an application, it is proposed that a simple rule 35 USC § 122(f) be implemented as follows:

35 U.S.C. 122 Confidential status of applications; publication of patent applications.

* * *

(f)(1) Notwithstanding the provisions of paragraph (e)[*] any third party within four months of publication of the patent application may submit a request for inter partes preissuance participation upon payment of a fee of $ 1000 and thereupon participate in a preissuance proceeding under section (e)(2), provided the requirements of section (e)(2) are met within four months thereafter. A total of no more than forty pages of double spaced text shall be permitted (exclusive of references cited in the preissuance proceeding).

(2) A patentee shall have the right to file a response days of no more than forty pages within ninety from the filing of a preissuance submission, whereupon the patent challenger under the foregoing paragraph shall have sixty days to file a response of no more than thirty pages.

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[*]**35 U.S.C. 122 Confidential status of applications; publication of patent applications.**

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(e) PREISSUANCE SUBMISSIONS BY THIRD PARTIES.—

(1) IN GENERAL.—Any third party may submit for consideration and inclusion in the record of a patent application, any patent, published patent application, or other printed publication of potential relevance to the examination of the application, if such submission is made in writing before the earlier of—

(A) the date a notice of allowance under section 151 is given or mailed in the application for patent; or

(B) the later of—

(i) 6 months after the date on which the application for patent is first published under section 122 by the Office, or

(ii) the date of the first rejection under section 132 of any claim by the examiner during the examination of the application for patent.

(2) OTHER REQUIREMENTS.—Any submission under paragraph (1) shall—

(A) set forth a concise description of the asserted relevance of each submitted document;

(B) be accompanied by such fee as the Director may prescribe; and

(C) include a statement by the person making such submission affirming that the submission was made in compliance with this section.

VIII. PROBLEMATIC MOTIONS TO AMEND POST GRANT ACTIONS

This proposal makes sense to simplify proceedings which is best accomplished by encouraging a third party challenger presenting evidence of unpatentability early in proceedings, often *prior* to an examination on the merits by the Examiner.

A. A Necessarily Limited Opportunity to Amend

Prosecution of patent applications without regard to the consequences of indefinite or too broad claims can be disastrous for the patentee in a post grant proceeding. In order for the Patent Office to meet the tight time requirements of the America Invents Act, this necessarily limits the possibility for post grant amendments.

Gatzemeyer provides an excellent summary of the challenges a patentee has in an America Invents Act review of its patent where it has failed to present the proper claims that have resulted in the patent in controversy:

Since their inception, the AIA reviews have been criticized for the patent owner's inability to amend claims. Yet, the most recent representative order on motions to amend has incorporated public commentary to improve a practitioner's ability to make successful arguments within the motion page limits.

1. *PTO Rulemaking and PTAB Practices: Motions to Amend Claims*

The AIA allows patent owners one opportunity to amend claims by filing a motion to cancel a challenged claim and propose a substitute claim. [35 U.S.C. §§ 316(d) (IPR), § 326(d) (CBM and PGR) (2012).] The proposed amendment is not granted automatically, but only upon the patent owner having demonstrated by a preponderance of the evidence that the proposed claims are patentable. [*See id.* § 42.1(d) (noting that the "default evidentiary standard is a preponderance of the evidence").] While the statute clarified that amendments cannot enlarge the scope of the claims, [*see* 35 U.S.C. § 316(d)(3) (2012); *see also* 37 C.F.R. § 42.121(a)(2)(ii) (2014) (implementing rules consistent with 35 U.S.C. § 316(d)(3)),] Congress empowered the PTAB to establish the standards and procedures for granting a patent owner's motion to amend. The PTAB's initial proposed rules provided little guidance, merely stating that a motion to amend may not be granted where the amendment does not respond to a ground of unpatentability involved in the trial or where the amendment enlarges the claim scope or introduces new matter.

The PTAB provided some transparency by issuing a series of representative orders on motions to amend. [*See Representative Orders, Decisions, and Notices,* U.S. Patent & Trademark Office, http://www.uspto.gov/ip/boards/bpai/representative_orders_and_opinions.jsp (last visited Feb. 2, 2015).] The first order, in *Nichia Corp. v. Emcore Corp.*, was issued in June 2013 and specified the level of written description support for proposing substitute claims. [See *Nichia Corp. v. Emcore Corp*., IPR2012-00005, 2013 WL 8352845, Paper No. 27 (P.T.A.B. June 3, 2013).] The PTAB explained that the motion to amend must clearly identify the written description support for the proposed substitute claims and "set forth the support in the *original disclosure*of the patent for each proposed substitute claim." [*Id.* at *3 (emphasis in original) (citing 37 C.F.R. §42.121(b)(1) (2014)).]

The PTAB also specified the written description test as "whether the original disclosure of the application relied upon reasonably conveys to a person of ordinary skill [sic] in the art that the inventor had possession of the claimed subject matter as of the filing date.' [(*Id.*)]"

The second order, in *Idle Free Systems, Inc. v. Bergstrom, Inc.,* was also issued in June 2013. It set the standard for demonstrating the patentability of each proposed amended or substitute claim over the prior art. [*See Idle Free Sys., Inc. v. Bergstrom, Inc*., IPR2012-00027, 2013 WL 5947697, Paper No. 26 (P.T.A.B. June 11, 2013).] The PTAB advised patent owners to specifically identify the feature(s) added to each substitute claim and to provide "technical facts and reasoning about those feature(s), including construction of new claim terms, sufficient to persuade the [PTAB] that the proposed substitute claim is patentable over the prior art of record, and over prior art not of record but known to the patent owner." The patent owner should present "the specific technical disclosure of the closest prior art known to the patent owner, and not just a conclusory remark that no prior art known to the patent owner renders obvious the proposed substitute claims."
In January 2014, the PTAB's resulting final written decision in *Idle Free* issued, with a clarification that the patent owner is "not assumed to be aware of every item of prior art presumed to be known to a hypothetical person of ordinary skill in the art," but rather is expected to "set forth what it does know about the level of ordinary skill in the art, and what was previously known, regarding each feature it relies and focuses on for establishing patentability of its proposed substitute claims." [Idle Free Sys., Inc. v. Bergstrom, Inc., IPR2012-00027, 2014 WL 824156, Paper No. 66, at *33 (P.T.A.B. Jan. 7, 2014).] The "all prior art known" requirement raised concerns among practitioners, who assumed it required the patent owner to find all relevant prior art; however, these concerns were downplayed at a February 2014 Patent Public Advisory Committee meeting by Administrative Patent Judge J. Lee. [*See Patent Public Advisory Committee Meeting,* U.S. Patent & Trademark Office, http://www.uspto.gov/about/advisory/ppac/ppac_transcript_20140212.pdf (last visited Feb. 2, 2015).] His response was simple, in theory: "[a]ll the patent owner needs to tell us is what the patent owner itself does know and what it does know about the level of ordinary skill." [*Id.*]

Finally, in May 2014, the PTAB granted-in-part a motion to amend in *International Flavors & Fragrances Inc. v. United States* and the final written decision was designated as an informative decision on a successful motion to amend claims. [*Int'l Flavors & Fragrances Inc. v. United States,* IPR2013-00124, 2014 WL 2120542, Paper No. 12 (P.T.A.B. May 20, 2014); *see Representative Orders, Decisions, and Notices,* U.S. Patent & Trademark Office, http://www.uspto.gov/ip/boards/bpai/representative_orders_and_opinions.jsp (last visited Feb. 2, 2015).] The U.S. government, the patent owner, did not file any response to the challenger's petition but only filed a motion to cancel and amend the patent claims and proposed nineteen substitute claims. [Int'l Flavors & Fragrances Inc., IPR2013-00124, 2014 WL 2120542, Paper No. 12, at *2.] In the motion, the patent owner provided several publications, as well as an expert declaration, to demonstrate the level of ordinary skill in the art and the patentability of the features in the proposed substitute claims. [*Id.* at *12.] The petitioner did not file an opposition to the motion to amend, and the PTAB concluded that the patent owner had shown, by a preponderance of the evidence, that all but one of the substitute claims were patentable over the prior art. [20140916.pdf (last accessed Feb. 2, 2015).] It was thought that amendments during AIA trials would become more frequent after *International Fragrances,* yet practitioners continue to feel a successful motion is out of reach. [59]

[59] Ryan J. Gatzemeyer, *Are Patent Owners Given a Fair Fight? Investigating the AIA Trial Practices,* § II- C, *Motions to Amend Claims,* 30 Berkeley Tech. L.J. 531, 552-55 (2015)(footnotes integrated into text or omitted).

B. Prophylactic Applicant Actions during *Ex Parte* Procurement

In the first instance, there are still too many applicants who "flood" the PTO with too many claims, which often results in the Examiner doing the best job possible *within the limited time frame permitted for each examination*. As a result of the presentation of two many claims, the applicant faces a double whammy. In the first instance, the high number of claims escalates the chance for inconsistencies and ambiguitis multiplies. In the second instance, the Examiner is faced with time pressures and as a result will often overlook such inconsistencies and ambiguities, as formal matters are correctly seen to be secondary to finding and applying the most relevant prior art for obviousness issues under 35 USC § 103.

Patent applicants therefore should carefully draft their applications with a minimal number of claims sufficient to satisfy business interests, and also focus upon only the most relevant prior art; this is as opposed to filing dozens of claims and "dumping" every conceivable reference, relevant or not, into an Information Disclosure Statement:

Practice tip: **How many prior art citations are "too many"? Thirty prior art citations may be all right if there are only five claims, but thirty prior art citations may be too many if there are fifty claims. The point of a holistic approach to patent drafting is that the sum total of the time necessary to consider all the claims, all the prior art and all other features should cumulatively be within the time the Examiner has allocated for his first action.**

Practice tip: **A widespread belief exists that because an applicant pays for twenty claims with his basic filing fee (or many more claims with additional fees) the applicant has a *right* to submit as many claims as desired. In practice, this right is shallow as the presence of too many claims for an Examiner to consider within his fixed time for a first action means that shortcuts will be taken in the issuance of the first action including the possibility of either an incomplete search or an incomplete formalities study – or both.**

Practice tip: **If there are, say, ten "main claims" to a new product but the applicant wants to have, say, forty further claims to combination claims for the new product for new uses or methods, consider segregating the "main claims" from the remaining claims in clearly separate sets of claims: This approach invites a restriction requirement, whereby the "main claims" can be elected with deferral of the remaining claims for one or more divisional applications.**

Professor Lemley asks: "How much time and money should the Patent and Trademark Office spend deciding whether to issue a patent? *** [T]he answer is 'a lot more than it does now.' The PTO has come under attack of late for failing to do a serious job of examining patents, thus allowing bad patents to slip through the system."[60] His view is shared by others.[61]

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[60] Mark A. Lemley, Rational Ignorance at the Patent Office, 95 Nw. U. L. Rev. 1495, 1495 (2001)(citing Julie E. Cohen, *Reverse Engineering and the Rise of Electronic Vigilantism: Intellectual Property Implications of "Lock-Out" Programs*, 68 S. Cal. L. Rev. 1091, 1177-80 (1995); Andy Johnson-Laird, *Looking Forward, Legislating Backward?*, 4 J. Small & Emerging Bus. L. 95, 120-24 (2000); Jay P. Kesan & Marc Banik, *Patents as Incomplete Contracts: Aligning Incentives for R&D Investment with Incentives to Disclose Prior Art*, 2 Wash. U. J.L. &

Pol'y 23 (2000); Robert P. Merges, *As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts and Patent System Reform*, 14 Berkeley Tech. L.J. 577 (1999); John R. Thomas, *Collusion and Collective Action in the Patent System: A Proposal for Patent Bounties*, 2001 U. Ill. L. Rev. 305, 316-22; Simson Garfinkel, *Patently Absurd*, Wired, July 1994, at 104; James Gleick, *Patently Absurd*, *N.Y. Times Magazine*, Mar. 12, 2000, at 44; Lawrence Lessig, *The Problem with Patents, Standard*, Apr. 23, 1999, available at http:// www.thestandard.com/article/display/ 0,1151,4296,00.html; Greg Aharonian, *Patenting the Internet, Electronic Commerce, Bioinformatics*, at http:// www.bustpatents.com/index.html; Jeff Bezos, *An Open Letter on the Subject of Patents*, at http://www.amazon.com/exec.obidos/subst/misc/patents.html.").

[61] Lee Petherbridge, Jason Rantanen & R. Polk Wagner, *Unenforceability*, 70 Wash. & Lee L. Rev. 1751, 1779 (2013)("[I]t might be that *** the patent law should simply require more disclosure from applicants – a prior art search, perhaps. *** But the reality is that we do not have a search requirement; until we do, it appears that the doctrine of inequitable conduct can provide some of the desired behavioral incentives."); Jay P. Kesan & Marc Banik, *Patents as Incomplete Contracts: Aligning Incentives for R&D Investment with Incentives to Disclose Prior Art*, 2 Wash. U. J.L. & Pol'y 23, 46 (2000)("[T]he patentee does not receive any incentives to conduct a thorough prior art search and disclose it to the PTO."); Stephen M. McJohn, *Patents: Hiding from History*, 24 Santa Clara Computer & High Tech. L.J. 961, 971 (2008)("Do not do a prior art search to see if others have invented similar technology, because you will then have to submit any relevant prior art along with your patent application. Do not even keep up on technology in the field because if you find out that others have developed relevant technology, you will likewise have to let the Patent Office know."); Susan W. Graf, Comment, *Improving Patent Quality through Identification of Relevant Prior Art: Approaches to Increase Information Flow to the Patent Office*, 11 Lewis & Clark L. Rev. 495, 504 (2007)("[A]pplicants may have disincentives to perform a thorough prior art search during prosecution of an application. One reason is a strategic one, in that applicants may be able to obtain a broader patent if the examiner is not aware of prior art that is material to the patentability of their claims.")(footnote omitted); Michael Meehan, *Increasing Certainty and Harnessing Private Information in the U.S. Patent System: A Proposal for Reform*, 2010 Stan. Tech. L. Rev. 1, 12 (2010)(With a prior art search "there is no increased presumption of validity in the courts and competitors do not learn of the increased certainty of validity."); Kimberly A. Moore, *Worthless Patents*, 20 Berkeley Tech. L.J. 1521, 1537-38 (2005)("It seems logical that applicants who more highly value a particular patent

Lemley says that "the common thread among [proposed solutions] seems intuitively obvious: the PTO should do a more careful job of reviewing patent applications and should weed out more 'bad' patents."[62]

C. Minimizing the "Broadest Reasonable Interpretation"

In case after case, claims are given an unhelpfully broad construction under the rule that claims should be given their "broadest reasonable interpretation." Yet, the patent applicant has it within his discretion to include in any patent application a *Background of the Invention* section and in that section cabin an otherwise broader claim interpretation by providing a *specific definition* for a claim limitation at the point of novelty:

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would be likely to file more claims and do a more thorough prior art search prior to filing. Hence, the larger the number of citations made, the more likely maintenance fees will be paid."); Jeff A. Ronspies, *Does David Need a New Sling? Small Entities Face a Costly Barrier to Patent Protection*, 4 J. Marshall Rev. Intell. Prop. L. 184, 200 (2004)("Because [prior art] searches are not obligatory and generally vary in cost proportionately to their scope, most are limited so as to keep costs at a minimum. As a result, many prior art searches fail to discover relevant, pre-existing innovations.")(footnotes omitted).

[62] Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 Nw. U. L. Rev. at 1495-96.

As explained elsewhere:

The Supreme Court has affirmed the Federal Circuit view "that the broadest reasonable interpretation standard in IPRs 'was properly adopted by PTO regulation.'" *In re Cuozzo Speed Techs., LLC*, 778 F.3d 1271, 1282 (Fed. Cir.2015), *aff'd sub nom Cuozzo Speed Technologies, LLC v. Lee*, 136 S.Ct. 2131 (2016).

In addition to affirming the right of the Patent Office to establish the "broadest reasonable interpretation standard", the Supreme Court in *Cuozzo Speed* added its imprimatur as to a policy rationale to support this standard:

"[T]he regulation [setting forth the 'broadest reasonable interpretation' standard of claim interpretation] represents a reasonable exercise of the rulemaking authority that Congress delegated to the Patent Office. For one thing, construing a patent claim according to its broadest reasonable construction helps to protect the public. A reasonable, yet unlawfully broad claim might discourage the use of the invention by a member of the public. Because an examiner's [ ] use of the broadest reasonable construction standard increases the possibility that the examiner will find the claim too broad (and deny it), use of that standard encourages the applicant to draft narrowly. This helps ensure precision while avoiding overly broad claims, and thereby helps prevent a patent from tying up too much knowledge, while helping members of the public draw useful information from the disclosed invention and better understand the lawful limits of the claim. See § 112(a); *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S.Ct. 2120, 2129 (2014); see also *In re Yamamoto*, 740 F.2d 1569, 1571 (Fed. Cir.1984).***"[63]

[63] *Cuozzo Speed Technologies, LLC v. Lee*, 136 S.Ct. 2131, 2144-45 (2016).

As stated in *Schriber-Schroth,* it is axiomatic that claims are not to be read *in vacuo* but "are always to be read or interpreted in light of its specifications."[64]

As explained in the *Sneed* case, "[i]t is axiomatic that, in proceedings before the PTO, claims in an application are to be given their broadest reasonable interpretation *consistent with the specification*, *In re Prater*, 415 F.2d 1393, 1404 (CCPA 1969), and that claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Johnson*, 558 F.2d 1008 1016 (CCPA 1977)." [65]

The *Sneed* case underpins a more recent explanation in *Suitco Surface* of the rule that the scope of claims in Patent Office proceedings must be 'consistent with the specification': 'Although the PTO emphasizes that it was required to give all 'claims their broadest reasonable construction' ***, this court has instructed that any such construction be 'consistent with the specification, . . . and that claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art.' *In re Bond*, 910 F.2d 831, 833 (Fed.Cir.1990) (quoting *In re Sneed*, 710 F.2d 1544, 1548 (Fed.Cir.1983)) (emphasis added [by the court]). 'The PTO's construction here, though certainly broad, is unreasonably broad. *** [C]laims should always be read in light of the specification and teachings in the underlying patent. See *Schriber-Schroth Co. v. Cleveland Trust Co.*, 311 U.S. 211, 217 (1940)('The claims of a patent are always to be read or interpreted in light of its specifications.')."[66]

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[64] *Schriber-Schroth Co. v. Cleveland Trust Co*., 311 U.S. 211, 217 (1940).

[65] *In re Sneed*, 710 F.2d 1544, 1548 (Fed.Cir.1983)(emphasis added); *see also In re Bond*, 910 F.2d 831, 833 (Fed.Cir.1990) (quoting *Sneed*).

[66] *In re Suitco Surface, Inc*., 603 F.3d 1255, 1260 (Fed. Cir. 2010).

Sneed was a reiteration of basic principles of claim construction as being keyed to the specification. As explained by Circuit Judge Bryson in the *en banc Phillips* case:

"Shortly after the creation of this court, Judge Rich wrote that '[t]he descriptive part of the specification aids in ascertaining the scope and meaning of the claims inasmuch as the words of the claims must be based on the description. The specification is, thus, the primary basis for construing the claims.' *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 452 (Fed.Cir.1985). ***

"That principle has a long pedigree in Supreme Court decisions as well. *See Hogg v. Emerson,* 47 U.S. (6 How.) 437, 482 (1848) (the specification is a 'component part of the patent' and 'is as much to be considered with the [letters patent] in construing them, as any paper referred to in a deed or other contract'); *Bates v. Coe,* 98 U.S. 31, 38 (1878) ('in case of doubt or ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and meaning of the language employed in the claims'); *White v. Dunbar,* 119 U.S. 47, 51 (1886) (specification is appropriately resorted to 'for the purpose of better understanding the meaning of the claim'); *Schriber-Schroth Co. v. Cleveland Trust Co*., 311 U.S. 211, 217 (1940) ('The claims of a patent are always to be read or interpreted in light of its specifications.'); *United States v. Adams,* 383 U.S. 39, 49 (1966) ('[I]t is fundamental that claims are to be construed in the light of the specifications and both are to be read with a view to ascertaining the invention.')." [*Phillips v. AWH Corp*., 415 F.3d 1303, 1315-16 (Fed. Cir. 2005)(en banc)(Bryson, J.).].[67]

[67] Wegner, FIRST TO FILE PATENT DRAFTING: A PRACTITIONER'S GUIDE, § 6:7, *Interpretation "In Light of [the] Specifications"* (Thomson Reuters 2017).

The best way to make sure that a definition of a claim term is given ultimate weight in the determination of the scope of protection is to include a definition of a term in the *Summary of the Invention*:

On the one hand, a "glossary" or "definition" of every term in a patent should *not* be a part of the drafting strategy. But, for an element of the claim at the point of novelty to distinguish over the prior art, here, the *Summary of the Invention* immediately after the first reference to the element should contain a *specific definition* of that element. For example:

"As the 'Framus' of the invention is meant…"

Without the specific definition, the patent challenger at the PTAB will attempt to show that the "Framus" has a broader meaning beyond what the applicant has intended and, if "reasonable", that definition should control in proceedings at the PTAB. If this broader definition moves the claim closer to the prior art, the equation is shifted in favor of the patent challenger.

While the PTAB operates under the "broadest reasonable interpretation" rule of claim construction, it is clear that a *specific definition* trumps this general rule of construction: "[P]atentees can act as their own lexicographers if they ''clearly set forth a definition of the disputed claim term' other than its plain and ordinary meaning.'" *Vasudevan Software, Inc. v. Microstrategy, Inc.*, 782 F.3d 671 (Fed. Cir., 2015)(Linn, J.)(quoting *Thorner v. Sony Computer Entm't Am., LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012), quoting *CCS Fitness, Inc. v. Brunswick Corp*., 288 F.3d 1359, 1366 (Fed. Cir. 2002)). *See also In re Bass*, 314 F.3d 575, 577 (Fed.Cir.2002)("[T]he PTO must apply the broadest reasonable meaning to the claim language, taking into account any definitions presented in the specification."); *In re American Academy of Science Tech Center*, 367 F.3d 1359, 1364 (Fed. Cir. 2004)(quoting *Bass*).

Thus, where an element is given a *specific definition* in the *Summary of the Invention* this should bar a Patent Office interpretation of that element broader than this definition. As explained in *Microsoft v. Proxyconn:*

"In *Cuozzo*, this court held that the broadest reasonable interpretation standard in IPRs 'was properly adopted by PTO regulation.' [*In re Cuozzo Speed Techs., LLC*, 778 F.3d 1271, 1282 (Fed. Cir.2015), *aff'd sub nom Cuozzo Speed Technologies, LLC v. Lee*, 136 S.Ct. 2131 (2016)]. * * *

"That is not to say, however, that the Board may construe claims during IPR so broadly that its constructions are *unreasonable* under general claim construction principles. *** Rather, '*claims should always be read in light of the specification* and teachings in the underlying patent.' [*In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir. 2010)]. * * * Even under the broadest reasonable interpretation, *the Board's construction 'cannot be divorced from the specification* and the record evidence,' *In re NTP, Inc*., 654 F.3d 1279, 1288 (Fed. Cir. 2011), and 'must be consistent with the one that those skilled in the art would reach,' *In re Cortright*, 165 F.3d 1353, 1358 (Fed. Cir. 1999). A construction that is 'unreasonably broad' and which does not 'reasonably reflect the plain language and disclosure' will not pass muster. *Suitco*, 603 F.3d at 1260."[68]

The *en banc* court in *Aqua Products* overruled the *Proxyconn* case to the extent that the majority of the court considers that the patent law "unambiguously requires the petitioner to prove all propositions of unpatentability, including for amended claims." More completely, the principal opinion by Judge O'Malley in the *en banc* consideration of *Proxyconn* states that:

Upon review of the statutory scheme, we believe that § 316(e) unambiguously requires the petitioner to prove all propositions of unpatentability, including for amended claims. This conclusion is dictated by the plain language of § 316(e), is supported by the entirety of the statutory scheme of which it is a part, and is

[68] *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292 (Fed. Cir. 2015)(Prost, C.J.).

reaffirmed by reference to relevant legislative history. Because a majority of the judges participating in this en banc proceeding believe the statute is ambiguous on this point, we conclude in the alternative that there is no interpretation of the statute by the Director of the Patent and Trademark Office ("PTO") to which this court must defer under *Chevron, U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984). And we believe that, in the absence of any required deference, the most reasonable reading of the AIA is one that places the burden of persuasion with respect to the patentability of amended claims on the petitioner. Finally, we believe that the Board must consider the entirety of the record before it when assessing the patentability of amended claims under § 318(a) and must justify any conclusions of unpatentability with respect to amended claims based on that record.

Because the participating judges have different views—both as to the judgment we should reach and as to the rationale we should employ in support of that judgment, as explained below, today's judgment is narrow. The final written decision of the Board in this case is vacated insofar as it denied the patent owner's motion to amend the patent. The matter is remanded for the Board to issue a final decision under § 318(a) assessing the patentability of the proposed substitute claims without placing the burden of persuasion on the patent owner.[69]

Overturning *Proxyconn,* Judge O'Malley explains the situation:

To the extent the PTO's 2015 commentary relied on this court's endorsement of its practices in *Proxyconn*, as discussed above, *Proxyconn* never considered § 316(e) or whether the ultimate burden of persuasion on the patentability of amended claims could be placed on the patent owner; neither issue was ever in debate. And, to the extent the PTO's 2016 commentary relied on *Synopsys* and *Nike*, it is well established that an agency's belief that a statute or court decision compels or authorizes its practices is not the type of analysis to which deference is due. *See*,

[69] *Aqua Products, Inc. v. Matal,* ___ F.3d __, 2017 WL 4399000 (Fed. Cir. 2017)(en banc)(O'Malley, J.)(footnote omitted). There were a total of six (6) opinions by the *en banc* court. [69] Newman, Lourie, Moore, Wallach, JJ., joining Judge O'Malley, Dyk, Reyna, JJ., concur in result; (2) Moore, J., joined by Newman, O'Malley, JJ; (3) Reyna, J., joined by Dyk, J., joined by Dyk, J., and in part by Prost, C.J., Taranto, Chen, Hughes, JJ.; (4) Taranto, J., joined by Prost, C.J., Chen, Hughes, JJ., dissenting from the judgment, joined in part by Dyk, Reyna, JJ.; (5) Hughes, J., joined by Chen, J., dissenting.

e.g., *Negusie v. Holder*, 555 U.S. 511, 521 (2009); *Nat'l Org. of Veterans' Advocates v. Sec'y of Veterans Affairs*, 314 F.3d 1373, 1379 n.7 (Fed. Cir. 2003) ("It is, of course, impermissible for the Department to adopt regulations ... on the ground that particular regulations are *required* under the unambiguous language of the statutes." (emphasis added)). Indeed, it is an indication that no reasoned analysis occurred.

In sum, the PTO has failed to make any determination on the ambiguity of either § 316(d)(1) or § 316(e) at any point before the briefing before this court. Even in its briefing, moreover, the PTO initially contends that § 316(e) does not govern amended claims at all, and only points to its interpretations of its own rules in the alternative. We therefore conclude that the Board's decisions do not reflect "a reasonable accommodation of manifestly competing interests ... [where] the agency considered the matter in a detailed and reasoned fashion, and the decision involves reconciling conflicting policies," and, thus, conclude that no basis for deference under either *Chevron* or *Auer* exists. *Chevron*, 467 U.S. at 865, 104 S.Ct. 2778 (footnotes omitted).

* * *

With nothing to which we must defer for our interpretation of § 316(d) and § 316(e), we are left to determine the most reasonable reading of those provisions. Specifically, we are tasked to decide in the first instance whether the AIA either requires or authorizes placing the burden of proving the patentability of amended claims on the patent owner rather than the petitioner. For all the reasons discussed in section V.A.1 of this opinion, we believe that the most natural reading of the statute is that it does not.

For these reasons, we, along with Judges Dyk and Reyna, conclude that the Board erred when it imposed the burden of proving the patentability of its proposed substitute claims on Aqua. We reach this conclusion today by following two different analytical paths: we address this issue as part of a *Chevron* Step Two analysis, while Judges Dyk and Reyna follow the approach laid out in *Encino*, where the Supreme Court treated the question of whether the agency had engaged in the type of regulatory action to which deference would be due as a threshold inquiry. Once it concluded that the agency actually had not analyzed the statute or explained why the statute should be interpreted in a given way, the Supreme Court dispensed with further reference to *Chevron*; it ordered the court of appeals to interpret the statute in the first instance. *Encino*, 136 S.Ct. at 2126–27. The

Supreme Court has vacillated on whether this inquiry is always a threshold inquiry, however, rather than one that falls under *Chevron* Step Two. *Compare id.* at 2124–26, *with, e.g.*, *Michigan v. EPA*, 135 S.Ct. 2699, 2707–08 (2015) (addressing sufficiency of agency rulemaking at *Chevron* Step Two).

Because we believe a thorough discussion of the statutory scheme at the outset lends context to the deference inquiry, and because we ultimately must interpret the statutory scheme either way, we address deference at Step Two. Judges Dyk and Reyna chose the alternative route. But, we end up in the same place under either approach: (1) there is no considered statutory interpretation that has been undertaken by the agency to which we must defer; and (2) in the absence of regulatory action to which we must defer, the burden of proving the unpatentability of all claims in an IPR—both original and amended—is on the petitioner.[70]

The patentee who includes a *definition* of claim elements in the *Summary of the Invention* avoids a broader interpretation of such elements. As explained in *SAS Institute, Inc. v. ComplementSoft, LLC*., ___ F.3d __, __. 2016 WL 3213103 (Fed. Cir. 2016)(Stoll, J.):

[70] *Aqua Products*, slip op. at 24, 26.

"[The patent challenger] argues that because the Board's construction is narrow, it cannot be the broadest reasonable interpretation of the claim term. This is not so. While we have endorsed the Board's use of the broadest reasonable interpretation standard in IPR proceedings, we also take care to not read 'reasonable' out of the standard. This is to say that '[e]ven under the broadest reasonable interpretation, the Board's construction cannot be divorced from the specification and the record evidence, and must be consistent with the one that those skilled in the art would reach.' [*Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015) (internal quotation marks omitted) (first quoting *In re NTP, Inc.*, 654 F.3d 1279, 1288 (Fed. Cir. 2011); and then quoting *In re Cortright*, 165 F.3d 1353, 1358 (Fed. Cir. 1999))."

The "broadest reasonable interpretation" rule of claim construction does not mean an *in vacuo* determination of the meaning of the claim wording, but, rather, that other factors are involved, particularly that claims should be given "broadest reasonable interpretation *consistent with the specification.*"[71] That the Patent Office should honor a definition in the specification to cabin an otherwise broad interpretation of a claim element is made clear by the *Manual of Patent Examining Procedure*:

[71] *In re Bond*, 910 F2d 831, 833 (Fed. Cir. 1990)(quoting *In re Sneed,* 710 F.2d 1544, 1548 (Fed.Cir.1983) (citations omitted)("It is axiomatic that, in proceedings before the PTO, claims in an application are to be given their *broadest reasonable interpretation consistent with the specification,* [ ] and that claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art.")(emphasis added); *In re Hyatt,* 211 F.3d 1367, 1372 (Fed. Cir. 2000)(Bryson, J.)(citing *In re Graves,* 69 F.3d 1147, 1152 (Fed.Cir.1995); *In re Etter,* 756 F.2d 852, 858, (Fed.Cir.1985) (en banc))("[D]uring examination proceedings, claims are given their *broadest reasonable interpretation consistent with the specification.*")(emphasis added); *In re Montgomery,* 677 F.3d 1375, 1379 (Fed. Cir. 2012)(Dyk, J.)(quoting *In re Am. Acad. of Sci. Tech Ctr.,* 367 F.3d 1359, 1364 (Fed.Cir.2004), quoting *In re Bond,* 910 F.2d 831, 833 (Fed.Cir.1990)) ("During examination, 'claims ... are to be given their *broadest reasonable interpretation consistent with the specification,* and ... claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art.'");
PPC Broadband, Inc. v. Corning Optical Communication RF, LLC, 815 F.3d 747, 751 (Fed. Cir. 2016) (citing *In re Cuozzo Speed Techs., LLC,* 793 F.3d 1268, 1279 (Fed.Cir.2015), *aff'd sub nom Cuozzo Speed Technologies, LLC v. Lee,* 136 S.Ct. 2131 (2016)).("In IPR proceedings, the Board gives claims *their broadest reasonable interpretation consistent with the specification.*")(emphasis added).

"The broadest reasonable interpretation does not mean the broadest possible interpretation. Rather, the meaning given to a claim term must be consistent with the ordinary and customary meaning of the term (*unless the term has been given a special definition in the specification), and must be consistent with the use of the claim term in the specification and drawings*."[72]

The Patent Office in the ensuing section of the *Manual* underscores the point that to trump the broadest reasonable interpretation rule there must be a clear definition of an alternate meaning set forth in the specification:

"* * * Under a broadest reasonable interpretation, words of the claim must be given their plain meaning, *unless such meaning is inconsistent with the specification*. *** [T]he best source for determining the meaning of a claim term is the specification – *the greatest clarity is obtained when the specification serves as a glossary for the claim terms*. * * *

"The presumption that a term is given its ordinary and customary meaning may be rebutted by the applicant by *clearly setting forth a different definition of the term* in the specification. *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997) (the USPTO looks to the ordinary use of the claim terms taking into account definitions or other 'enlightenment' contained in the written description)[.] *When the specification sets a clear path to the claim language, the scope of the claims is more easily determined and the public notice function of the claims is best served.*

* * *

"[T]he best source for determining the meaning of a claim term is the specification – *the greatest clarity is obtained when the specification serves as a glossary for the claim terms.* See, e.g., *In re Abbott Diabetes Care Inc.*, 696 F.3d 1142, 1149-50 (Fed. Cir. 2012) (construing the term 'electrochemical sensor' as 'devoid of external connection cables or wires to connect to a sensor control unit' to be consistent with 'the language of the claims and the specification'); *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260-61 (Fed. Cir. 2010) (construing the term 'material for finishing the top surface of the floor' to mean 'a clear, uniform layer

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[72]MPEP § 2111, *Claim Interpretation; Broadest Reasonable Interpretation* (R-07)(2015)(emphasis added).

on the top surface of a floor that is the final treatment or coating of a surface' to be consistent with 'the express language of the claim and the specification'); *Vitronics Corp. v. Conceptronic Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996) (construing the term 'solder reflow temperature' to mean 'peak reflow temperature' of solder rather than the 'liquidus temperature' of solder in order to remain consistent with the specification).

* * *

"The only exceptions to giving the words in a claim their ordinary and customary meaning in the art are (1) *when the applicant acts as his own lexicographer*; and (2) when the applicant disavows or disclaims the full scope of a claim term in the specification. To act as his own lexicographer, *the applicant must clearly set forth a special definition of a claim term in the specification* that differs from the plain and ordinary meaning it would otherwise possess. *** In both of these cases, 'the inventor's intention, as expressed in the specification, is regarded as dispositive.' *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (en banc). See also *Starhome GmbH v. AT&T Mobility LLC*, 743 F.3d 849, 857 (Fed. Cir. 2014) (holding that the term 'gateway' should be given its ordinary and customary meaning of 'a connection between different networks' because nothing in the specification indicated a clear intent to depart from that ordinary meaning)[.]

* * *

"An applicant is entitled to be his or her own lexicographer and may rebut the presumption that claim terms are to be given their ordinary and customary meaning by clearly setting forth a definition of the term that is different from its ordinary and customary meaning(s) in the specification at the time of filing. See *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (holding that an inventor may define specific terms used to describe invention, but must do so 'with reasonable clarity, deliberateness, and precision' and, if done, *must ''set out his uncommon definition in some manner within the patent disclosure' so as to give one of ordinary skill in the art notice of the change'* in meaning) (quoting *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1387-88 (Fed. Cir. 1992)).

"Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim. *Toro Co. v. White Consolidated Industries Inc.*, 199 F.3d 1295, 1301 (Fed. Cir. 1999) (meaning of words used in a claim is not construed in a 'lexicographic vacuum, but in the context of the specification and drawings'). ***

"However, it is important to note that any special meaning assigned to a term 'must be sufficiently clear in the specification that any departure from common usage would be so understood by a person of experience in the field of the invention.' *Multiform Desiccants Inc. v. Medzam Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998). See also *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357 (Fed. Cir. 1999) and MPEP § 2173.05(a).

* * *

"If the specification does not provide a special definition for the claim term, the examiner should apply the ordinary and customary meaning to the claim term. If the specification provides a special definition for the claim term, the examiner should use the special definition. However, because there is a presumption that claim terms have their ordinary and customary meaning and *the specification must provide a clear and intentional use of a special definition for the claim term to be treated as having a special definition*, an Office action should acknowledge and identify the special definition in this situation." [MPEP § 2111.01, *Plain Meaning* (R-07)(2015)(emphasis added).][73]

[73] Wegner, FIRST TO FILE PATENT DRAFTING: A PRACTITIONER'S GUIDE, § 6:8, *Summary of the Invention* Definitions to Cabin the "Broadest Reasonable Interpretation" (Thomson Reuters 2017).

The *Summary of the Invention* should include a *definition* of a term at the point of novelty in order to cabin an otherwise "broadest reasonable interpretation".[74] If there *is* a *specific* definition in the *Summary of the Invention* at the point of novelty, the definition should restrict the scope of the claim to that definition for purposes of establishing nonobviousness of the invention.[75] Conversely, if a term at the point of novelty is *not* restricted by a specific definition then the "broadest reasonable interpretation" rule goes unchecked to the detriment of the patentee.[76]

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[74] *In re American Academy of Science Tech Center*, 367 F.3d 1359, 1364 (Fed. Cir. 2004)(Bryson, J.)("During examination, 'claims ... are to be given their broadest reasonable interpretation consistent with the specification, and ... claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art.' *In re Bond*, 910 F.2d 831, 833 (Fed.Cir.1990); *accord* [*In re Bass*, 314 F.3d 575, 577 (Fed.Cir.2002)] ('[T]he PTO must apply the broadest reasonable meaning to the claim language, taking into account any definitions presented in the specification.'); *In re Cortright*, 165 F.3d 1353, 1358 (Fed.Cir.1999) ('Although the PTO must give claims their broadest reasonable interpretation, this interpretation must be consistent with the one that those skilled in the art would reach.')[.]").

[75] *In re Trans Texas Holdings Corp.*, 498 F.3d 1290, 1298 (Fed. Cir. 2007)(Dyk, J.)("Claims are given 'their broadest reasonable interpretation, consistent with the specification, in reexamination proceedings.' *In re Yamamoto*, 740 F.2d 1569, 1571 (Fed.Cir.1984). The term 'responsive to the rate of inflation' is defined in the specification as 'mean[ing] directly responsive to a market indicator of prior actual inflation and it is not meant to include the market's expectation of future inflation.' As the Board noted, the specification's definition only requires that the inflation adjustment be 'directly responsive' to a market indicator of inflation. There is nothing in the specification or the prosecution history that requires an immediate inflation-adjustment every time the rate of inflation increases.")(record citation omitted).

[76] *In re Buszard*, 504 F.3d 1364, 1369 (Fed. Cir. 2007)(Prost, J., dissenting)("Because the Board must give claim language its broadest reasonable interpretation, I would affirm the Board's construction of 'flexible polyurethane foam reaction mixture.' Of course, had Buszard's specification provided a definition of the term 'flexible polyurethane foam reaction mixture,' the Board would have been required to give that term the definition recited in the specification.")

D. Presentation of Twin Sets of Claims

That applicant should carefully parse his claims to make sure that they are the minimum number to meet business objectives. Providing clear and understandable claims is the first objective of claim drafting.

Should claims be presented as broadly as possible is also an important issue. In the patent drafting stage, the answer is "yes", claims should be drafted broadly, but a big "but": Thus, while "claim 1" should often, indeed, be drafted up to the limits of the state of the prior art, it often occurs that there is a specific subgeneric range that must be protected at all costs. Here, "claim 1" may be drafted up to the limits of the state of the prior art, but *in addition* a second set of claims should be provided to cover the subgeneric claim. The subgeneric claim should be drafted in independent form, with a set of subclaims keyed to that independent but subgeneric claim.

The benefit of providing this second set of claims is that if there *is* a post grant attack made against the patent, and if at that time it is a good business decision to retreat to the scope of the second set of claims (the independent claim to the subgenus plus subclaims to that independent claim), then the patentee *as a matter of right* can *disclaim* the first set of claims to "claim 1" (and its subclaims).

For example, where a post grant challenge is made against "claim 1" (and subclaims), the patentee as a matter of right is free to file a *statutory disclaimer* of the first set of claims to claim 1 and subclaims based thereon. This can be done prior to (or concurrently) with the patentee's response to the post grant challenge.

E. **Case Studies based on Non-Patent Prior Art Invalidations**

In the wake of cases including *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S.Ct. 2120 (2014), and *In re Packard*, 751 F.3d 1307 (Fed. Cir. 2014), there is a heightened awareness of the right to challenge patent validity based upon drafting errors that lead to ambiguities which can be challenged under 35 USC § 112(b).

1. ***Securus Technologies* case**

An example of a formalities challenge is found in the *Securus Technologies* case. As explained by Judge Benoit in her opinion instituting Post Grant Review in the *Securus Technologies* case:

> Petitioner challenges claims 1–19 of the '386 patent as being unpatentable under 35 U.S.C. § 112(b), which sets forth "[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention." Pet. 12–16. Petitioner contends that the claims "fail to 'inform those skilled in the art about the scope of the invention with reasonable certainty." ' *Id.* at 13 (quoting *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S.Ct. 2120, 2129 (2014)). In its contentions that the claims are indefinite, Petitioner also indicates that "[a] claim is indefinite when it contains words or phrases whose meaning is unclear." Pet. 13 (citing MPEP § 2173.05(e) (9th ed., Nov. 2014) (citing *In re Packard*, 751 F.3d 1307, 1314 (Fed. Cir. 2014))); *see* MPEP § 2173.02 I. Petitioner further asserts that a

lack of antecedent basis can create a lack of clarity. Pet. 13 (citing *Haliburton Energy Servs., Inc. v. M–I LLC*, 554 F.3d 1244, 1249 (Fed. Cir. 2008)).

Independent claims 1, 8, and 13 each requires (i) accessing information "that is associated with the authenticated caller"; (ii) "authenticating at least one of the wireless communication device and a caller"; and (iii) "the authenticating including: receiving identifying information associated with the caller." Petitioner contends that, in reciting "the authenticated caller" (which Petitioner contends lacks antecedent basis), "a caller," and "the caller," the independent claims are ambiguous as to "whether the terms identify the same caller or multiple different callers." *Id.* at 12–13.

One way to understand these independent claims is by requiring the authenticating step to be performed before the payment processing step. *See, e.g., Mformation Techs., Inc. v. Research in Motion Ltd.*, 764 F.3d 1392, 1398–99 (Fed. Cir. 2014) (indicating "a claim requires an ordering of steps when the claim language, as a matter of logic or grammar, requires that the steps be performed in the order written" (quotation and citations omitted)). Based on that understanding, the alleged antecedent basis is resolved: "a caller" recited in the authenticating step provides antecedent basis for the recited "the authenticated user." In this interpretation, there is a single caller to which "a caller," "the caller," and "the authenticated caller" refer.

To require such a step-order in the independent claims, however, the authenticating step must authenticate a caller. The plain language of the independent claims, however, is not so limited but requires only "authenticating *at least one* of the wireless communication device and a caller," which is also consistent with the specification. *See, e.g.*, Ex. 1001, 9:12–15 (determining "whether the [wireless] device is authorized to operate on the facility network" and disabling phone calls if the wireless device is not authorized); *id.* at 9:21–24 (determining "whether the user is valid" and disabling phone calls if the user is not valid).

Interpreting the independent claims to allow authenticating a wireless communication device (without authenticating a caller) seems at odds with requiring the authenticating step to be performed for a caller (and before the payment processing step) to resolve a lack of antecedent basis for "the authenticated user."[77]

2. *Bayer Cropscience v. Exosect Limited*

In *Bayer Cropscience LP v. Exosect Limited*, Judge Kaiser in his opinion in the validity challenge to the Exosect patent found a draftsmanship ambiguity to support the Board's institution of a Post Grant proceeding:

Petitioner argues that [the claims] are indefinite because the meaning of "adheres more firmly," a term recited in each claim, is unclear. Petitioner proposes first that this term may not limit the scope of the challenged claims at all and then proposes that, if the term does limit the scope of the challenged claims, it might do so in either of two possible ways. As discussed above, we do not agree with Petitioner that the present record is sufficient to conclude that the term "adheres more firmly" does not limit the scope of the challenged claims, and we leave that determination for trial. In addition, as discussed above, to the extent that this term is limiting, the present record is insufficient to permit us to determine the proper construction. *Because we cannot determine the proper scope of this term, we are persuaded that Petitioner has shown sufficiently, on the present record and for purposes of the present decision, that the scope of the challenged claims is uncertain.* Accordingly, we determine that it is more likely than not that the challenged claims are indefinite because of their use of the "adheres more firmly" functional limitation. Therefore, we institute post-grant review on the asserted ground that the term "adheres more firmly" renders claims 1–3, 5–8, and 10–12 indefinite.[78]

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[77] *Securus Technologies, Inc. v. Global Tel*Link Corp*., 2017 WL 2270237, slip op. at 3-4 (Patent Tr. & App. Bd. 2017) (footnotes deleted).

[78] *Bayer Cropscience LP v. Exosect Limited*, 2017 WL 4570443, slip op. at 8 (Patent Tr. & App. Bd. 2017)(emphasis added; citations omitted).

. 3. *Grünenthal v. Antecip Bioventures II*

Judge Murphy in his opinion in *Grünenthal v. Antecip Bioventures II* explains the Board's institution of post grant review where claim 1 of the patent reads:

> Claim 1. A method of treating complex regional pain syndrome comprising orally administering zoledronic acid to a human being in need thereof, wherein the human being receives about 80 to about 500 mg of zoledronic acid within a period of six months.

Judge Murphy explains that "[o]n the present record, we determine that Petitioner has demonstrated it is more likely than not that claims 1–17 are unpatentable for insufficient written description of the dosing regimen limitation recited in independent claim 1 ***."[79] Presumably, the patentee failed to include a definition in his *Summary of the Invention.*[80]

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[79] *Grünenthal gmbH v. Antecip Bioventures II LLC,* 2017 WL 2901321, slip op. at 9 (Patent Tr. & App. Bd. 2017).

[80] *Id.* at 6 ("In a post-grant review, the claims of an unexpired patent are interpreted using the broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.200(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016). Under that standard, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Any special definition for a claim term must be set forth in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).").

4. ***Peroxychem v. Innovative Environmental Technologies***

By amendment in *Peroxychem v. Innovative Environmental Technologies*, the patentee had added a numerical range definition of "persulfate and one or more trivalent metals in[ ] the environmental medium ... wherein ... [an] amount of the one or more trivalent metals is between ***approximately 17–30% of molecular weight of the persulfate***."[81]

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[81] *Peroxychem LLC v. Innovative Environmental Technologies, Inc.*, 2016 WL 7985450 (Patent Tr. & App. Bd. 2016)(Yang, APJ). The Board in more detail states:

Petitioner argues that claims 1–26 are unpatentable under 35 U.S.C. § 112(a) because the Specification of the '245 patent does not provide adequate written-description support. Pet. 35–40. Based on the current record, we determine Petitioner has established that, more likely than not, it would prevail in this assertion.

Claim 1 recites "introducing persulfate and one or more trivalent metals into the environmental medium ... wherein ... [an] amount of the ***one or more trivalent metals is between approximately 17–30% of molecular weight of the persulfate***." Ex. 1001, 7:14–21. * * * As Petitioner points out, this limitation was added in response to the final rejection during prosecution. *See* Pet. 17 (citing Ex. 1002, 22–34). According to Petitioner, "[t]he newly claimed ratio of 17–30% of trivalent metals to persulfate is not described in the specification." *Id.* at 18. Instead, the applicant, in the Remarks section of the response to the final rejection, set forth 13 steps to explain how the ratio was derived. *Id.* (citing Ex. 1002, 30–31).

Petitioner contends that the "Thirteen Steps, submitted concurrently with the added subject matter in independent Claims 1 and 15 ... include several significant assumptions and requirements that are not found in the claims or the specification." *Id.* at 38. For example, Petitioner points out that various steps require sodium persulfate as the persulfate and iron as the metal. *Id.* (citing Ex. 1002, 30–31). These assumptions and requirements, however, according to Petitioner, are not supported by the Specification. *Id.* (citing Ex. 1001, 4:4–5 (disclosing that trivalent metal irons include manganese (Mn^{3+})), 5:34–35 (disclosing sodium, potassium, and ammonium salts as persulates)). In addition, Petitioner argues that "step 13 assumes an arbitrary '25% range' in calculating the claimed ratio." *Id.* at 39. As a result, Petitioner asserts the "Thirteen Steps ... confirm that the original specification did not contain a written description of the invention that is sufficiently detailed so that a POSA can reasonably conclude that the inventors had possession of the full scope of such claims on May 10, 2013," the filing date of the application that issued as the '245 patent. *Id.* at 38. We find Petitioner's argument persuasive at this stage of the proceedings.

In reaching a conclusion of invalidity under 35 USC § 112(a), Judge Yang explains that:

To satisfy the written-description requirement, the specification, within its "four corners," must reasonably convey to those skilled in the art that the inventor had possession, "as shown in the disclosure," of the claimed subject matter as of the filing date. *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). Based on the current record, we are persuaded by Petitioner's argument that the Specification of the '245 patent does not meet this standard. Of course, in some instances, a patentee can rely on information that is well known in the art to satisfy the written-description requirement. *Id.* ("[T]he level of detail required to satisfy the written-description requirement varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology."). The record before us, however, does not show that the 17–30% ratio would have been within the knowledge of one of ordinary skill in the art. In sum, based on the current record, we are persuaded that it is more likely than not that the challenged claims are unpatentable under 35 U.S.C. § 112(a) because the Specification of the '245 patent does not provide adequate written-description support, at least for the 17–30% ratio recited in the claims.[82]

[82] *Id.*, slip op at 3-4.

5. *US Endodontics v. Gold Standard Instruments*

In *US Endodontics v. Gold Standard Instruments*,a patent challenge was made on the basis of a lack of an enabling disclosure, the claimed invention is a method for making a root canal instrument with a shank of a superelastic nickel titanium alloy by "heat-treating the entire shank at a temperature above 25° C. up to but not equal to the melting point of the superelastic nickel titanium alloy."[83] In reaching a conclusion of invalidity, the opinion by Judge Goodson explains that:

"An enablement analysis begins with the disclosure in the specification." *Sitrick v. Dreamworks, LLC*, 516 F.3d 993, 1000 (Fed. Cir. 2008). We find that the guidance the Specification provides regarding how to achieve the deformation characteristic recited in the "wherein" clause is quite limited compared to the broad scope of claims 12–16. As summarized above, the '991 patent sought to overcome several deficiencies of prior art endodontic files. The '991 patent sought to fill a need for an endodontic files "that have high flexibility, have high resistance to torsion breakage, maintain shape upon fracture, can withstand increased strain, and can hold sharp cutting edges." Ex. 1001, 2:52–55. The Specification indicates that permanent deformation after bending, the characteristic recited in the "wherein" clause of claim 12, was only one of many features of the endodontic file with which the '991 patent was concerned. *See also id.* at 3:1–4, 6:49–60, 9:26–33.

The '991 patent includes a general description of the file (*id.* at 4:3–15, Figs. 1*a*, 1*b*) and a method of "heat-treating the shank at a temperature above 25° C.... Preferably, the temperature is from 400° C. up to but not equal to the melting point of the titanium alloy, and most preferably, the temperature is from 475° C. to 525° C." (*id.* at 4:16–21). The Specification discloses preferred gases for the heat-treatment (*id.* at 4:16–19), and exemplary times and temperatures:

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[83] *US Endodontics, LLC v. Gold Standard Instruments, LLC*, 2016 WL 7985423 (Patent Tr. & App. Bd. 2016)(Claim 12. "A method for manufacturing or modifying an endodontic instrument for use in performing root canal therapy on a tooth, the method comprising:
(a) providing an elongate shank having a cutting edge extending from a distal end of the shank along an axial length of the shank, the shank comprising a superelastic nickel titanium alloy, and
(b) after step (a), heat-treating the entire shank at a temperature above 25° C. up to but not equal to the melting point of the superelastic nickel titanium alloy.")

"In one example embodiment, the shank is heat-treated for approximately 1 to 2 hours. In another example embodiment, the shank is heat-treated at 500° C. for 75 minutes. However, other temperatures are suitable as they are dependent on the time period selected for heat exposure."

Id. at 4:24–29. The patent also describes alloys that can be used (*id.* at 4:30–62, 5:12–49) and coating processes (*id.* at 6:8–36).

In addition, the Specification describes fives examples. *See id.* at 7:16–9:33. In each example, one group of files is untreated, a second group is heat-treated at 500°C for 75 minutes, and a third group is "coated with titanium nitride using physical vapor deposition with an inherent heat-treatment." *Id.* at 7:36–41, 7:62–8:1, 8:22–27, 8:49–54, 9:9–14. Each example studies a different performance characteristic of the files. Example 4 studies the "angle of permanent deformation after the flexion test (ADP) reported in degrees of deflection performed in accordance with "ISO Standard 3630–1 …." *Id.* at 8:39–42. Example 4 states that the "files that were heat-treated … at 500° C. for 75 minutes showed the highest ADP." *Id.* at 8:57–59. Figure 6, which shows the results of the study in Example 4, indicates an angle of permanent deformation of nearly 30 degrees for the heat-treated files (i.e., those labeled "TT" in Figure 6). *Id.* at 8:44–45, 50–52, Fig. 6. Examples 1, 2, 3, and 5 study torsion, ability to withstand strain, flexibility, resistance to torsion breakage, and fatigue. *Id.* at 7:27–29, 7:53–55, 8:12–13, 31–33, 8:67–9:1.

Thus, the only example that relates to the deformation characteristic recited in the "wherein" clause of claim 12 is Example 4. That example discloses heat-treatment at 500°C for 75 minutes and an "inherent heat-treatment," the temperature and duration of which are not provided. *Id.* at 8:50–52. The Specification also explains that the temperature will depend on the time period of the heat-treatment. *Id.* at 4:27–29. Although the Specification discloses other, broader ranges of temperatures and times, none of these other temperatures or times is tethered to the deformation characteristic that is recited in claims 12–16. *See id.* at [57], 2:65–3:1, 4:16–21, 24–29.

The Specification's teaching that the deformation characteristic can be achieved using heat-treatment at 500°C for 75 minutes or "inherent heat-treatment" of undisclosed parameters is a narrow disclosure compared to the scope of the challenged claims. Claims 12–16 encompass temperature ranges from above 25°C (claims 12, 13, 15, 16) or 300°C (claim 14) up to but not equal to the melting point of the alloy (which is about 1300°C, *see* Ex. 1002 ¶ 17; Tr. 35:13–15), and are not limited to any duration for the heat-treatment.[84]

[84] *Id.*, slip op. at 9-10.

6. *Arkema v. Honeywell International*

In *Arkema v. Honeywell International* the Board manifested its expertise involving a prior use of an invention. [85]

Claim 1 is to a method for an automobile air conditioner "with refrigerant 1,1,1,2–tetrafluoroethane" and other features.[86] As explained by Judge Sawert in her opinion in *Arkema v. Honeywell*:

Section 102(a) provides that "[a] person shall be entitled to a patent unless ... the claimed invention was ... in public use ... before the effective filing date of the claimed invention." 35 U.S.C. § 102(a)(1). "The proper test for the public use prong ... is whether the purported use was accessible to the public or was commercially exploited." *Delano Farms Co. v. Cal. Table Grape Comm'n*, 778 F.3d 1243, 1247 (Fed. Cir. 2015) (quotation omitted). "Commercial exploitation is a clear indication of public use ...." *Invitrogen Corp. v. Biocrest Mfg., L.P.*, 424 F.3d 1374, 1380 (Fed. Cir. 2005).

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[85] *Arkema Inc. v. Honeywell International Inc.,* 2017 WL 3835956 (Patent Tr. & App. Bd. 2017)(Sawert, APJ).

[86] Claim 1: A method for producing an automobile air conditioning system for use with 2,3,3,3–tetrafluoropropene (HFO–1234yf) comprising:
(a) providing an automobile vapor compression air conditioning system usable with refrigerant 1,1,1,2–tetrafluoroethane (HFC–134a) and having at least one compressor and at least one condenser; and
(b) providing a heat transfer composition in said system, said heat transfer composition consisting essentially of:
(i) at least about 50% by weight of a low toxicity refrigerant suitable for use in automobile air conditioning systems, said refrigerant consisting essentially of HFO–1234yf; and
(ii) lubricant consisting essentially of polyalkylene glycol(s), and
wherein (1) said condenser is operable with said refrigerant in a temperature range that includes 150°F. and (2) said system when operating at a condenser temperature of 150°F. achieves a capacity relative to HFC–134a of about 1 and a Coefficient of Performance (COP) relative to HFC–134a of about 1.

Petitioner argues that "[t]here can be no doubt that the subject matter of the '017 patent claims ... was already in commercial use prior to the March 26, 2014, filing date." PGR12 Pet. 37. Specifically, Petitioner states that four vehicle models—the Ford Transit Custom Bus, the Mazda CX5 (2.0i and 2.2D models), and the Opel Mocca—all used HFO–1234yf and a PAG lubricant as early as 2012. *Id.* at 38. Petitioner asserts that these public uses anticipate claims 1–20 of the '017 patent. *Id.*

Patent Owner does not directly address Petitioner's evidence of prior public use, but instead relies on its argument that the claims of the '017 patent are entitled to priority to the April 29, 2004, filing date of the '525 application. PGR12 Resp. 61. Patent Owner also does not argue that 2–20 have a different effective filing date than claim 1.[22] And, at oral argument, Patent Owner's counsel conceded that, if we find that the '017 patent has an effective filing date of March 26, 2014, then its claims would be unpatentable for prior public use:

JUDGE TIERNEY: I do have a couple of questions just before—when we go ahead and decide this case and write it up, I'm looking at the PGR2016–0012 case ... if we hold that the claims do not get benefit of the earlier date and it's limited to its 2014 date, do we need to go into discussion of the art at this time? I'm looking at the response.

MR. LOCASCIO: No, you don't, because it's Honeywell's own work, so *it's no stunner that Honeywell's own work years after their priority date and they came up with this would invalidate*, so no.

JUDGE TIERNEY: And turning over to PGR2016–0011, similar question, if Honeywell is limited to a 2014 date, would we need to go through and discuss the art? Because then it's—

MR. LOCASCIO: I think [it] would be moot at that time, *because under the PGR12, that art would, I think by all acknowledgments, then be covered by the claims and invalidate [them] ....*

Tr. 114:15–115:18 (emphases added). Thus, we find that Patent Owner does not contest that a heat-transfer composition consisting essentially of HFO–1234yf and PAG for AAC was in public commercial use before the March 26, 2014, filing date of the '017 patent.[87]

Thus, the Board "f[ou]nd that Petitioner's evidence, together with Patent Owner's concessions, demonstrates by a preponderance of evidence that the claimed subject matter of the '017 patent was in commercial use before its March 26, 2014, effective filing date. *See* Ex. 1002 ¶¶ 399–409. [88]

[87] *Arkema v. Honeywell International,* slip op. at 20-21.

[88] The passage just quoted above continues: "In particular, as to claims 1, 3–10, 12, 13, and 15–20, we credit Dr. Brown's uncontested testimony that the refrigerant-lubricant AAC composition of the Ford Transit Custom Bus, the Mazda CX 5 (2.0i and 2.2D), and the Opel Mocca used HFO–1234yf and a PAG lubricant as early as 2012. Ex. 1002 ¶ 399 (citing Ex. 1013, 2, 38, 55, 70). We also credit Dr. Brown's calculations, which show that the Ford Transit Custom Bus had an AAC refrigerant-lubricant composition of 26.7% of PAG lubricant and 73.3% of HFO–1234yf (Ex. 1002 ¶ 401 (citing Ex. 1013, 38)); the Mazda CX 5 2.0i had 16.7% PAG lubricant and 83.3% HFO–1234yf (Ex. 1002 ¶ 402 (citing Ex. 1013, 55)); the Mazda CX 5 2.2D had a 17.5% PAG lubricant and 82.5% HFO–1234yf (*id.*); and the Opal Mocca had 11.6% PAG lubricant and 88.4% HFO–1234yf (Ex. 1002 ¶ 402 (citing Ex. 1013, 70))." (footnote omitted).

IX. NON-PRECEDENTIAL *DE FACTO* PRECEDENT

To anyone familiar with the inner workings of the Federal Circuit but not the PTAB, it would be unthinkable in almost any situation to cite a nonprecedential Federal Circuit opinion because the nonprecedential nature of an opinion from that body is based upon the *prospective, unilateral* determination by the *panel itself* that the opinion is to be nonprecedential *before the opinion is released to the public.* Citation of a nonprecedential opinion is thus in direct defiance of the decision of the Board members themselves that the opinion should not be cited. But, insofar as a *Board* opinion is determined, the decision whether a Board opinion is or is not "precedential" is made *after the fact, after the release of the opinion* where in the end it is the Director of the PTO who has the final say in the determination whether a Board opinion is or is not published. This is all made clear in "SOP 2"

Only an opinion *nominated by the Chief Judge* is eligible for consideration as precedential, and even if a vote is taken in favor of precedential status, that status is still subject to the veto power of the Director. This is all made crystal clear in infamous "SOP 2", the official policy of the Patent Trial and Appeal Board, which explains the publication procedure at the PTAB. *Standard Operating Procedure 2 (Revision 9), Publication of Opinions and Designation of Opinions as Precedential, Informative, Representative, and Routine,* § II, *Nominating an Opinion,* https://www.uspto.gov/sites/default/files/documents/sop2-revision-9-dated-9-22-2014.pdf (last visited October 30, 2017):

SOP 2 NOMINATING AN OPINION AS PRECEDENTIAL

II. Nominating an opinion

A. The Board consists of administrative patent judges (judges), including a Chief Administrative Patent Judge (Chief Judge) and four *ex officio* members: the Director, the Deputy Director, the Commissioner for Patents and the Commissioner for Trademarks (35 U.S.C. § 6(a)).

B. Any member of the Board may recommend to the Chief Judge that an opinion, including Board decisions and orders, be designated as precedential, informative, or representative.

C. The appellant, the patentee, a petitioner, or a third party member of the public may, within 60 days of issuance of the opinion, request in writing that an opinion be made precedential, by forwarding that request, along with accompanying reasons, to the Chief Judge. Where a written request for a precedential opinion has been received, the Chief Judge shall respond in writing to the requester to confirm receipt of the request.

III. Precedential opinion

A. If the Chief Judge considers a nominated opinion to be an appropriate candidate for designation as precedential, the Chief Judge will circulate the opinion to all members of the Board. An opinion may be considered appropriate for any reason, but particular emphasis will be placed on opinions resolving conflicts or addressing novel questions.

B. During a stated, limited period (typically ten business days), each Board member will be invited to vote and will have an opportunity to comment in writing on whether the opinion should be designated as precedential. The Chief Judge may share the comments with members of the authoring panel.

C. After the expiration of the period, if a majority of the Board's voting members agree that the opinion should be made precedential, and after considering the Board members' comments, the Chief Judge shall notify the Director of the results of the voting.

D. If the Director concurs that the opinion should be designated precedential, the Director will so notify the Chief Judge. No opinion may be precedential without concurrency by the Director.

As seen from "SOP 2" above, a complex nominating process is involved *after the opinion has been released.* After the complex web of procedures set forth in the announcement of SOP 9, even if a majority of the Board's voting members agree that an opinion should be "precedential", it is still within the veto power of the Director to block a precedential status for the opinion. And, in any event, the Board does not get to vote unless the Chief Judge has "nominated" the opinion for precedential status.

One may ponder, precisely *what* does the *Manual* say about "SOP 2"?

Nothing.

Absolutely nothing.

Thus, the *Manual* says nothing about how an opinion becomes "precedential"; rather, the *Manual* states that "[t]he [Technical Center ("TC")] Director may circulate and discuss [a] decision [just decided by the Board" among some or all of the supervisors in the TC, and the supervisors, in turn, may circulate the decision among the examiners in their art units, depending on the subject matter or issues in the decisions.").[89]

[89] MPEP § 1720, *Dissemination of Court and Patent Trial and Appeal Board Decisions,* § II, *Patent Trial and Appeal Board Decisions* [R-07.2015](Westlaw on line edition current through Ninth Ed., Oct. 2015; latest edition downloaded on October 30, 2017) ("A decision rendered by the Patent Trial and Appeal Board (Board) is returned to the examiner. The examiner takes action consistent with the decision rendered by the Board unless rehearing of the Board decision will be requested (MPEP § 1214.04). The TC Director may circulate and discuss the decision among some or all of the supervisors in the TC, and the supervisors, in turn, may circulate the decision among the examiners in their art units, depending on the subject matter or issues in the decisions.")

The *Manual* also implicitly says that any opinion may be cied as it makes no distinction as to a "precedential" Board opinion: "In citing a decision which is available to the public but which has not been published, the tribunal rendering the decision and complete data identifying the paper should be given."[90]

[90] MPEP § 707.06, *Citation of Decisions, Orders Memorandums, and Notices* [R-11.2013](Westlaw on line edition current through Ninth Ed., Oct. 2015; latest edition downloaded on October 30, 2017)("In citing court decisions, when it is convenient to do so, the U.S. or Federal Reporter citation should be provided; in the alternative, the USPQ citation should be given.
The citation of decisions which are not available to the public should be avoided. It is important to recognize that a federal district court decision that has been reversed on appeal cannot be cited as authority.
In citing a decision which is available to the public but which has not been published, the tribunal rendering the decision and complete data identifying the paper should be given.
Thus, a decision of the Patent Trial and Appeal Board which has not been published but which is available to the public in the patented file should be cited, as "*Ex parte* -- --, decision of the Patent Trial and Appeal Board, Patent No. -- -- --, paper No. -- --, -- -- -- pages."
Decisions found only in patented files should be cited only when there is no published decision on the same point.
When a Director's order, notice or memorandum not yet incorporated into this manual is cited in any official action, the title and date of the order, notice or memorandum should be given. When appropriate other data, such as a specific issue of the *Official Gazette* may also be given.")(emphasis added).

X. WHITHER CHEVRON DEFERENCE FOR BOARD DECISIONS?

Duke University Law School Professors Stuart Minor Benjamin and Arti K. Rai suggest that a higher level of deference should be given to decisions of the PTAB that are designated as "precedential", but also take the view that "the guidelines [sh]ould be revamped to require a rehearing leading to a precedential opinion. A rehearing would bring in an additional source of legal authority for the guidelines give greater authority to the Director, and ensure that the PTO was in fact crafting a new decision (even if, in cases in which the Director agreed with the original decision, it bore a strong resemblance to the original one).[91]

Prior to this statement, Benjamin and Rai lay out their position on precedential status as follows:

> Consistent with the position of [Thomas W. Merrill & Kristin E. Hickman, Chevron *'s Domain*, 89 Geo. L.J. 833, 908 (2001),] as well as the Second, Ninth, and Tenth Circuits, [John Golden, *Working Without* Chevron *: The PTO as Prime Mover*, 65 Duke L.J. 1655, 1663 (2016),] argues that ordinary PTAB decisions that are not reviewed by the PTO Director do not receive *Chevron* deference. Golden's view has some merit. Although only about one-third of the total cohort of more than 250 PTAB judges hear post-grant trials, that fraction still encompasses more than eighty judges. These judges, who serve on panels of three, receive, and must make decisions on, approximately 150 petitions per month. To some extent, PTAB procedures resemble the sort of uncoordinated decisionmaking process that [*United States v. Mead Corp*., 533 U.S. 218 (2001), identified as an indicator of decisions that lack the force of law. In *Mead*, the scale of decisionmaking and lack of coordination were more extreme: "[T]o claim that classifications have legal force is to ignore the reality that 46 different Customs offices issue 10,000 to

[91] Stuart Minor Benjamin and Arti K. Rai, *Administrative Power in the Era of Patent Stare Decisis*, 65 Duke L.J. 1563, 1586 (2016).

15,000 of them each year. Any suggestion that rulings intended to have the force of law are being churned out at a rate of 10,000 a year at an agency's 46 scattered offices is simply self-refuting." *Mead*'s reasoning that *Chevron* deference is not warranted for the actions of many different units not supervised by the agency head supports the proposition that *Chevron* deference is inapplicable to routine PTAB decisions that are not specifically supervised by the PTO Director.

But that is not the end of the story. The PTO has promulgated guidelines for designating selected PTAB opinions as precedential and explicitly binding on the PTO. [U.S. Patent & Trademark Office, Patent Trial and Appeal Board Standard Operating Procedure 2 (Revision 9) Publication of Opinions and Designation of Opinions As Precedential, at pt. III(E), http://www.uspto.gov/sites/default/files/documents/sop2-revision-9-dated-9-22-2014.pdf [[[http://perma.cc/RCM6-6JAH] (laying out procedures for the designation of PTAB opinions as precedential, and providing that "[a] precedential opinion is binding authority in subsequent matters involving similar facts or issues").] The PTO's guidelines provide that any PTAB judge, the Director, the Deputy Director, the Commissioner for Patents, or the Commissioner for Trademarks can nominate a PTAB opinion to be designated as precedential. If the chief judge considers the opinion an appropriate candidate for designation as precedential, PTAB judges can then vote on the question. Even if a majority votes in favor, however, the Director's agreement is also required.

This process would seem to satisfy the more demanding of the two interpretations of *Mead* outlined above. The agency has created a process by which PTAB opinions are precedential and binding, and the process entails the explicit agreement of the agency head. * * *.[92]

[92] *Id.*, 65 Duke L.J. at 1585-86 (footnotes integrated into text in bracket or omitted).

XI. NECESSARY PRACTICAL SYSTEM REFORMS

Assuming that the post grant procedures survive Supreme Court review in the *Oil States Energy Services* case,[93] there remain several reforms that may be considered:

A. Pre-Examination Preissuance Submissions

It makes sense to simplify proceedings. This may be perhaps best accomplished by encouraging a third party challengers to present evidence of unpatentability early in proceedings, often *prior* to an examination on the merits by the Examiner.

To facilitate earlier action on an application, it is proposed that a simple rule 35 USC § 122(f) be implemented as follows:

[93] If the Supreme Court were to hold that a post-grant review system is unconstitutional, it would be as a matter of language a relatively simple concept to change to a pre-grant review system. But, the problematic feature of such a reform is that this would require a statutory change that would face opposition from those against the current system.

35 U.S.C. 122 Confidential status of applications; publication of patent applications.

* * *

(f)(1) Notwithstanding the provisions of paragraph (e)[*] any third party within four months of publication of the patent application may submit a request for inter partes preissuance participation upon payment of a fee of $ 1000 and thereupon participate in a preissuance proceeding under section (e)(2), provided the requirements of section (e)(2) are met within four months thereafter. A total of no more than forty pages of double spaced text shall be permitted (exclusive of references cited in the preissuance proceeding).

(2) A patentee shall have the right to file a response days of no more than forty pages within ninety from the filing of a preissuance submission, whereupon the patent challenger under the foregoing paragraph shall have sixty days to file a response of no more than thirty pages.

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[*]**35 U.S.C. 122 Confidential status of applications; publication of patent applications.**

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(e) PREISSUANCE SUBMISSIONS BY THIRD PARTIES.—

(1) IN GENERAL.—Any third party may submit for consideration and inclusion in the record of a patent application, any patent, published patent application, or other printed publication of potential relevance to the examination of the application, if such submission is made in writing before the earlier of—

(A) the date a notice of allowance under section 151 is given or mailed in the application for patent; or

(B) the later of—

(i) 6 months after the date on which the application for patent is first published under section 122 by the Office, or

(ii) the date of the first rejection under section 132 of any claim by the examiner during the examination of the application for patent.

(2) OTHER REQUIREMENTS.—Any submission under paragraph (1) shall—

(A) set forth a concise description of the asserted relevance of each submitted document;

(B) be accompanied by such fee as the Director may prescribe; and

(C) include a statement by the person making such submission affirming that the submission was made in compliance with this section.

B. Terminating Continuation of Sham Post Grant Proceedings

Even if it is assumed, *arguendo,* that all post grant proceedings are initially brought in good faith, there is a substantial number of proceedings originally brought in good faith that, after filing, will be seen to lack substantial merit and, in the end, will be losing efforts. A great many of such actions brought by a patent challenger are *maintained* until a final decision.

Why?

One answer is that to continue to pursue such an action until a final decision may take, say, 18 months or more, while an immediate termination of proceedings may well result in an economic detriment greater than the legal fees to continue the proceedings for that 18 months of more.

The Office should be provided with the opportunity to issue monetary sanctions sufficient to deter such conduct.

XII. PRE-GRANT PROPHYLACTIC DRAFTING OPTIONS

There are steps that an applicant *can* take in drafting his application to mitigate if not entirely avoid some issues that transpire in post grant proceedings at the Patent Office. Respect for the limited period of time the Examiner has for each examination is a critical predicate to understanding *why* the applicant for optimum results simply *must* present his case in a simple and direct manner so that the Examiner will have the *time* necessary to carefully consider formal matters, particularly formal claim drafting issues.

A. Crucial Understanding of Examiner Time Pressures

As explained elsewhere:

Each Examiner has a quota of "disposals" per quarter year that varies based upon the rated complexity of his particular technological art that he examines and his experience level. Reaching or exceeding the disposal goal is at the very center of the Examiner's professional life. Statistics are periodically released within each Art Unit that show precise disposal results. Substantially exceeding the disposal goal may result in a substantial cash bonus while repeated failure to meet the disposal goal may in an extreme case result in dismissal from the examining corps.

As an example, consider the situation where a particular Examiner has a disposal goal such that he must complete a first action analysis, search and examination within, say, ten hours.

If the patent draftsman makes a presentation of a clean and easy to examine application with full citation of the best known prior art, then it may take, say, seven or eight hours for the complete first action analysis, search and examination.

Here, the Examiner generally *can and will* do a complete first action, including consideration of formal matters where a claim may appear to be indefinite. Here, the Examiner, upon finding patentable subject matter, will be prone to allow the application, perhaps after formalities have been met or claims

have been narrowed to avoid the prior art. The apparent indefiniteness will either be (a) explained to show why the claims are definite, strengthening the prosecution history; or (b) overcome by amending the claims in a manner at least implicitly suggested by the Examiner.

If, however, the Examiner would need, say, sixteen hours to do a complete first action analysis, search and examination, the Examiner, under his production pressure, is likely to cap the examination at ten hours. To do this, it is quite likely that there will *not* be a complete formalities examination, leaving open a "Chef America" scenario where a claim defect renders the claims meaningless from an infringement standpoint. Additionally, the Examiner will do his best to search the application within primary search areas, but skip some aspects of the search due to time constraints. *Where the Examiner knows that he has not conducted a complete search on the merits he is more unlikely to ever agree to allow the application.* Instead, he will kick the can down the road, forcing the applicant to file an RCE or continuing application, and thus avoid allowing claims where the Examiner is uncertain whether the claims are patentable or not.[94]

The common solution seen from outside the Beltway is that the answer to the time pressures the Examiner faces is that the Examiner should be given more time. But, there will *always* be more that the Examiner can do with more time, and if more time were given to Examiners patent applicants would simply add more time pressure be adding even more claims. Thus, the answer to the time question is <u>*not*</u> that Examiners should be given "a lot more [time] than [the PTO] does now."[95]

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[94] Wegner, FIRST TO FILE PATENT DRAFTING: A PRACTITIONER'S GUIDE, § 2:33, *Respect for the Examiner's Limited Time for Examination* (Thomson Reuters 2017)(footnotes renumbered to fit within the format of the current paper.).

[95] *See* § VIII-B, *Prophylactic Applicant Actions during Ex Parte Procurement* ("Professor Lemley asks: "How much time and money should the Patent and Trademark Office spend deciding whether to issue a patent? *** [T]he answer is 'a lot more than it does now.'")(citation omitted).

B. Cabining the Broadest Reasonable Interpretation

There has been a considerable discussion about the fact that the "broadest reasonable interpretation" of claims may give an element of the claimed invention an interpretation broad enough that, but for such interpretation, the claims are invalid as being too close to the prior art.

As a prophylactic against this use of the "broadest reasonable interpretation" of the claims as to an element at the point of novelty, a simple prophylactic solution during the initial drafting process (and sometimes in the prosecution of the application itself), the *Summary of the Invention* should include a *specific definition* of that element.

As explained elsewhere:

The Supreme Court has affirmed the Federal Circuit view "that the broadest reasonable interpretation standard in IPRs 'was properly adopted by PTO regulation.'" *In re Cuozzo Speed Techs., LLC*, 778 F.3d 1271, 1282 (Fed. Cir.2015), *aff'd sub nom Cuozzo Speed Technologies, LLC v. Lee*, 136 S.Ct. 2131 (2016).

In addition to affirming the right of the Patent Office to establish the "broadest reasonable interpretation standard", the Supreme Court in *Cuozzo Speed* added its imprimatur as to a policy rationale to support this standard:

"[T]he regulation [setting forth the 'broadest reasonable interpretation' standard of claim interpretation] represents a reasonable exercise of the rulemaking authority that Congress delegated to the Patent Office. For one thing, construing a patent claim according to its broadest reasonable construction helps to protect the public. A reasonable, yet unlawfully broad claim might discourage the use of the invention

by a member of the public. Because an examiner's [ ] use of the broadest reasonable construction standard increases the possibility that the examiner will find the claim too broad (and deny it), use of that standard encourages the applicant to draft narrowly. This helps ensure precision while avoiding overly broad claims, and thereby helps prevent a patent from tying up too much knowledge, while helping members of the public draw useful information from the disclosed invention and better understand the lawful limits of the claim. See § 112(a); *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S.Ct. 2120, 2129 (2014); see also *In re Yamamoto*, 740 F.2d 1569, 1571 (Fed. Cir.1984).***"[96]

As stated in *Schriber-Schroth*, it is axiomatic that claims are not to be read *in vacuo* but "are always to be read or interpreted in light of its specifications."[97]

As explained in the *Sneed* case, "[i]t is axiomatic that, in proceedings before the PTO, claims in an application are to be given their broadest reasonable interpretation *consistent with the specification*, *In re Prater*, 415 F.2d 1393, 1404 (CCPA 1969), and that claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Johnson*, 558 F.2d 1008 1016 (CCPA 1977)." [98]

The *Sneed* case underpins a more recent explanation in *Suitco Surface* of the rule that the scope of claims in Patent Office proceedings must be 'consistent with the specification': 'Although the PTO emphasizes that it was required to give all 'claims their broadest reasonable construction' ***, this court has instructed that any such construction be 'consistent with the specification, . . . and that claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art.' *In re Bond*, 910 F.2d 831, 833 (Fed.Cir.1990) (quoting *In re Sneed*, 710 F.2d 1544, 1548 (Fed.Cir.1983)) (emphasis added [by the court]). 'The PTO's construction here, though certainly broad, is unreasonably broad. *** [C]laims should always be read in light of the specification and

[96] *Cuozzo Speed Technologies, LLC v. Lee*, 136 S.Ct. 2131, 2144-45 (2016).

[97] *Schriber-Schroth Co. v. Cleveland Trust Co*., 311 U.S. 211, 217 (1940).
[98] *In re Sneed*, 710 F.2d 1544, 1548 (Fed.Cir.1983)(emphasis added); *see also In re Bond*, 910 F.2d 831, 833 (Fed.Cir.1990) (quoting *Sneed*).

teachings in the underlying patent. See *Schriber-Schroth Co. v. Cleveland Trust Co.*, 311 U.S. 211, 217 (1940)('The claims of a patent are always to be read or interpreted in light of its specifications.')."[99]

Sneed was a reiteration of basic principles of claim construction as being keyed to the specification. As explained by Circuit Judge Bryson in the *en banc Phillips* case:

"Shortly after the creation of this court, Judge Rich wrote that '[t]he descriptive part of the specification aids in ascertaining the scope and meaning of the claims inasmuch as the words of the claims must be based on the description. The specification is, thus, the primary basis for construing the claims.' *Standard Oil Co. v. Am. Cyanamid Co.,* 774 F.2d 448, 452 (Fed.Cir.1985). ***

"That principle has a long pedigree in Supreme Court decisions as well. *See Hogg v. Emerson,* 47 U.S. (6 How.) 437, 482 (1848) (the specification is a 'component part of the patent' and 'is as much to be considered with the [letters patent] in construing them, as any paper referred to in a deed or other contract'); *Bates v. Coe,* 98 U.S. 31, 38 (1878) ('in case of doubt or ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and meaning of the language employed in the claims'); *White v. Dunbar,* 119 U.S. 47, 51 (1886) (specification is appropriately resorted to 'for the purpose of better understanding the meaning of the claim'); *Schriber-Schroth Co. v. Cleveland Trust Co.,* 311 U.S. 211, 217 (1940) ('The claims of a patent are always to be read or interpreted in light of its specifications.');

United States v. Adams, 383 U.S. 39, 49 (1966)('[I]t is fundamental that claims are to be construed in the light of the specifications and both are to be read with a view to ascertaining the invention.')."[100]

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[99] *In re Suitco Surface, Inc*., 603 F.3d 1255, 1260 (Fed. Cir. 2010).

[100] *Phillips v. AWH Corp*., 415 F.3d 1303, 1315-16 (Fed. Cir. 2005)(en banc)(Bryson, J.).

Summary of the Invention **Definitions to Cabin the "Broadest Reasonable Interpretation"[101]**

On the one hand, a "glossary" or "definition" of every term in a patent should *not* be a part of the drafting strategy. But, for an element of the claim at the point of novelty to distinguish over the prior art, here, the *Summary of the Invention* immediately after the first reference to the element should contain a *specific definition* of that element. For example:

"As the 'Framus' of the invention is meant…"

Without the specific definition, the patent challenger at the PTAB will attempt to show that the "Framus" has a broader meaning beyond what the applicant has intended and, if "reasonable", that definition should control in proceedings at the PTAB. If this broader definition moves the claim closer to the prior art, the equation is shifted in favor of the patent challenger.

While the PTAB operates under the "broadest reasonable interpretation" rule of claim construction, it is clear that a *specific definition* trumps this general rule of construction: "[P]atentees can act as their own lexicographers if they ''clearly set forth a definition of the disputed claim term' other than its plain and ordinary meaning.'" *Vasudevan Software, Inc. v. Microstrategy, Inc.*, 782 F.3d 671 (Fed. Cir., 2015)(Linn, J.)(quoting *Thorner v. Sony Computer Entm't Am., LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012), quoting *CCS Fitness, Inc. v. Brunswick Corp*., 288 F.3d 1359, 1366 (Fed. Cir. 2002)). *See also In re Bass*, 314 F.3d 575, 577 (Fed.Cir.2002)("[T]he PTO must apply the broadest reasonable meaning to the claim language, taking into account any definitions presented in the specification."); *In re American Academy of Science Tech Center*, 367 F.3d 1359, 1364 (Fed. Cir. 2004)(quoting *Bass*).

Thus, where an element is given a *specific definition* in the *Summary of the Invention* this should bar a Patent Office interpretation of that element broader than this definition. As explained in *Microsoft v. Proxyconn:*

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[101] This section is taken directly from Wegner, FIRST TO FILE PATENT DRAFTING: A PRACTITIONER'S GUIDE, § 6:8, *Summary of the Invention Definitions to Cabin the "Broadest Reasonable Interpretation"* (Thomson Reuters 2017).

"In *Cuozzo*, this court held that the broadest reasonable interpretation standard in IPRs 'was properly adopted by PTO regulation.' [*In re Cuozzo Speed Techs., LLC*, 778 F.3d 1271, 1282 (Fed. Cir.2015), *aff'd sub nom Cuozzo Speed Technologies, LLC v. Lee*, 136 S.Ct. 2131 (2016)]. * * *

"That is not to say, however, that the Board may construe claims during IPR so broadly that its constructions are *unreasonable* under general claim construction principles. *** Rather, '*claims should always be read in light of the specification* and teachings in the underlying patent.' [*In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir. 2010)]. * * * Even under the broadest reasonable interpretation, *the Board's construction 'cannot be divorced from the specification* and the record evidence,' *In re NTP, Inc*., 654 F.3d 1279, 1288 (Fed. Cir. 2011), and 'must be consistent with the one that those skilled in the art would reach,' *In re Cortright*, 165 F.3d 1353, 1358 (Fed. Cir. 1999). A construction that is 'unreasonably broad' and which does not 'reasonably reflect the plain language and disclosure' will not pass muster. *Suitco*, 603 F.3d at 1260."[102]

Thus, the patentee who includes a *definition* of claim elements in the *Summary of the Invention* avoids a broader interpretation of such elements. As explained in *SAS Institute, Inc. v. ComplementSoft, LLC*., ___ F.3d __, __. 2016 WL 3213103 (Fed. Cir. 2016)(Stoll, J.):

"[The patent challenger] argues that because the Board's construction is narrow, it cannot be the broadest reasonable interpretation of the claim term. This is not so. While we have endorsed the Board's use of the broadest reasonable interpretation standard in IPR proceedings, we also take care to not read 'reasonable' out of the standard. This is to say that '[e]ven under the broadest reasonable interpretation, the Board's construction cannot be divorced from the specification and the record evidence, and must be consistent with the one that those skilled in the art would reach.' [*Microsoft Corp. v. Proxyconn, Inc*., 789 F.3d 1292, 1298 (Fed. Cir. 2015) (internal quotation marks omitted) (first quoting *In re NTP, Inc*., 654 F.3d 1279, 1288 (Fed. Cir. 2011); and then quoting *In re Cortright*, 165 F.3d 1353, 1358 (Fed. Cir. 1999))."

[102] *Microsoft Corp. v. Proxyconn, Inc*., 789 F.3d 1292 (Fed. Cir. 2015)(Prost, C.J.).

The "broadest reasonable interpretation" rule of claim construction does not mean an *in vacuo* determination of the meaning of the claim wording, but, rather, that other factors are involved, particularly that claims should be given "broadest reasonable interpretation *consistent with the specification.*"[103] That the Patent Office should honor a definition in the specification to cabin an otherwise broad interpretation of a claim element is made clear by the *Manual of Patent Examining Procedure*:

"The broadest reasonable interpretation does not mean the broadest possible interpretation. Rather, the meaning given to a claim term must be consistent with the ordinary and customary meaning of the term (*unless the term has been given a special definition in the specification), and must be consistent with the use of the claim term in the specification and drawings*."[104]

The Patent Office in the ensuing section of the *Manual* underscores the point that to trump the broadest reasonable interpretation rule there must be a clear definition of an alternate meaning set forth in the specification:

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[103]*In re Bond*, 910 F2d 831, 833 (Fed. Cir. 1990)(quoting *In re Sneed*, 710 F.2d 1544, 1548 (Fed.Cir.1983) (citations omitted)("It is axiomatic that, in proceedings before the PTO, claims in an application are to be given their *broadest reasonable interpretation consistent with the specification*, [ ] and that claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art.")(emphasis added); *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000)(Bryson, J.)(citing *In re Graves*, 69 F.3d 1147, 1152 (Fed.Cir.1995); *In re Etter*, 756 F.2d 852, 858, (Fed.Cir.1985) (en banc))("[D]uring examination proceedings, claims are given their *broadest reasonable interpretation consistent with the specification.*")(emphasis added); *In re Montgomery*, 677 F.3d 1375, 1379 (Fed. Cir. 2012)(Dyk, J.)(quoting *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed.Cir.2004), quoting *In re Bond*, 910 F.2d 831, 833 (Fed.Cir.1990)) ("During examination, 'claims ... are to be given their *broadest reasonable interpretation consistent with the specification*, and ... claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art.'");
PPC Broadband, Inc. v. Corning Optical Communication RF, LLC, 815 F.3d 747, 751 (Fed. Cir. 2016) (citing *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1279 (Fed.Cir.2015), *aff'd sub nom Cuozzo Speed Technologies, LLC v. Lee*, 136 S.Ct. 2131 (2016)).("In IPR proceedings, the Board gives claims *their broadest reasonable interpretation consistent with the specification*.")(emphasis added).

[104]MPEP § 2111, *Claim Interpretation; Broadest Reasonable Interpretation* (R-07)(2015)(emphasis added).

"* * * Under a broadest reasonable interpretation, words of the claim must be given their plain meaning, *unless such meaning is inconsistent with the specification*. *** [T]he best source for determining the meaning of a claim term is the specification – *the greatest clarity is obtained when the specification serves as a glossary for the claim terms*. * * *

"The presumption that a term is given its ordinary and customary meaning may be rebutted by the applicant by *clearly setting forth a different definition of the term* in the specification. *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997) (the USPTO looks to the ordinary use of the claim terms taking into account definitions or other 'enlightenment' contained in the written description)[.] *When the specification sets a clear path to the claim language, the scope of the claims is more easily determined and the public notice function of the claims is best served.*

* * *

"[T]he best source for determining the meaning of a claim term is the specification – *the greatest clarity is obtained when the specification serves as a glossary for the claim terms.* See, e.g., *In re Abbott Diabetes Care Inc.*, 696 F.3d 1142, 1149-50 (Fed. Cir. 2012) (construing the term 'electrochemical sensor' as 'devoid of external connection cables or wires to connect to a sensor control unit' to be consistent with 'the language of the claims and the specification'); *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260-61 (Fed. Cir. 2010) (construing the term 'material for finishing the top surface of the floor' to mean 'a clear, uniform layer on the top surface of a floor that is the final treatment or coating of a surface' to be consistent with 'the express language of the claim and the specification'); *Vitronics Corp. v. Conceptronic Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996) (construing the term 'solder reflow temperature' to mean 'peak reflow temperature' of solder rather than the 'liquidus temperature' of solder in order to remain consistent with the specification).

* * *

"The only exceptions to giving the words in a claim their ordinary and customary meaning in the art are (1) *when the applicant acts as his own lexicographer*; and (2) when the applicant disavows or disclaims the full scope of a claim term in the specification. To act as his own lexicographer, *the applicant must clearly set forth a special definition of a claim term in the specification* that differs from the plain and ordinary meaning it would otherwise possess. *** In both of these cases, 'the inventor's intention, as expressed in the specification, is regarded as dispositive.'

Phillips v. AWH Corp., 415 F.3d 1303, 1316 (Fed. Cir. 2005) (en banc). See also *Starhome GmbH v. AT&T Mobility LLC*, 743 F.3d 849, 857 (Fed. Cir. 2014) (holding that the term 'gateway' should be given its ordinary and customary meaning of 'a connection between different networks' because nothing in the specification indicated a clear intent to depart from that ordinary meaning)[.]

* * *

"An applicant is entitled to be his or her own lexicographer and may rebut the presumption that claim terms are to be given their ordinary and customary meaning by clearly setting forth a definition of the term that is different from its ordinary and customary meaning(s) in the specification at the time of filing. See *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (holding that an inventor may define specific terms used to describe invention, but must do so 'with reasonable clarity, deliberateness, and precision' and, if done, *must ''set out his uncommon definition in some manner within the patent disclosure' so as to give one of ordinary skill in the art notice of the change'* in meaning) (quoting *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1387-88 (Fed. Cir. 1992)).

"Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim. *Toro Co. v. White Consolidated Industries Inc.*, 199 F.3d 1295, 1301 (Fed. Cir. 1999) (meaning of words used in a claim is not construed in a 'lexicographic vacuum, but in the context of the specification and drawings'). ***

"However, it is important to note that any special meaning assigned to a term 'must be sufficiently clear in the specification that any departure from common usage would be so understood by a person of experience in the field of the invention.' *Multiform Desiccants Inc. v. Medzam Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998). See also *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357 (Fed. Cir. 1999) and MPEP § 2173.05(a).

* * *

"If the specification does not provide a special definition for the claim term, the examiner should apply the ordinary and customary meaning to the claim term. If the specification provides a special definition for the claim term, the examiner should use the special definition. However, because there is a presumption that claim terms have their ordinary and customary meaning and *the specification must provide a clear and intentional use of a special definition for the claim term to be*

treated as having a special definition, an Office action should acknowledge and identify the special definition in this situation."[105]

The *Summary of the Invention* should include a *definition* of a term at the point of novelty in order to cabin an otherwise "broadest reasonable interpretation".[106] If there *is* a *specific* definition in the *Summary of the Invention* at the point of novelty, the definition should restrict the scope of the claim to that definition for purposes of establishing nonobviousness of the invention.[107] Conversely, if a term at the point of novelty is *not* restricted by a specific definition then the "broadest reasonable interpretation" rule goes unchecked to the detriment of the patentee.[108]

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[105] MPEP § 2111.01, *Plain Meaning* (R-07)(2015)(emphasis added).

[106] *In re American Academy of Science Tech Center*, 367 F.3d 1359, 1364 (Fed. Cir. 2004)(Bryson, J.)("During examination, 'claims ... are to be given their broadest reasonable interpretation consistent with the specification, and ... claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art.' *In re Bond*, 910 F.2d 831, 833 (Fed.Cir.1990); *accord* [*In re Bass*, 314 F.3d 575, 577 (Fed.Cir.2002)] ('[T]he PTO must apply the broadest reasonable meaning to the claim language, taking into account any definitions presented in the specification.'); *In re Cortright*, 165 F.3d 1353, 1358 (Fed.Cir.1999) ('Although the PTO must give claims their broadest reasonable interpretation, this interpretation must be consistent with the one that those skilled in the art would reach.')[.]").

[107] *In re Trans Texas Holdings Corp.*, 498 F.3d 1290, 1298 (Fed. Cir. 2007)(Dyk, J.)("Claims are given 'their broadest reasonable interpretation, consistent with the specification, in reexamination proceedings.' *In re Yamamoto*, 740 F.2d 1569, 1571 (Fed.Cir.1984). The term 'responsive to the rate of inflation' is defined in the specification as 'mean[ing] directly responsive to a market indicator of prior actual inflation and it is not meant to include the market's expectation of future inflation.' As the Board noted, the specification's definition only requires that the inflation adjustment be 'directly responsive' to a market indicator of inflation. There is nothing in the specification or the prosecution history that requires an immediate inflation-adjustment every time the rate of inflation increases.")(record citation omitted).

[108] *In re Buszard*, 504 F.3d 1364, 1369 (Fed. Cir. 2007)(Prost, J., dissenting)("Because the Board must give claim language its broadest reasonable interpretation, I would affirm the Board's construction of 'flexible polyurethane foam reaction mixture.' Of course, had Buszard's specification provided a definition of the term 'flexible polyurethane foam reaction mixture,' the Board would have been required to give that term the definition recited in the specification.")

In parallel with the many cases that apply the "broadest reasonable interpretation" standard to claim interpretation at the Patent Office, there has been a parallel, consistent thread of decisions that show that a *specific definition* of claim terminology trumps the otherwise broadest reasonable interpretation of that terminology.[109]

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[109] *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997)("[T]he PTO applies to the verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, *taking into account whatever enlightenment by way of definitions* *** that may be afforded by the written description contained in the applicant's specification.")(emphasis added); *In re Avid Identification Systems, Inc.*,504 Fed.Appx. 885, 888 (Fed. Cir. 2013)("We agree with the Director that, as the Board properly gave the limitation 'unalterable data' its broadest reasonable interpretation consistent with the specification, it did not err in its construction. *** [B]ecause *there was no consistent, explicit definition in the specification*, and there were varied uses of the phrase in the patent, the Board under its broadest reasonable construction practice did not err in construing 'unalterable data' in the [ ] patent claims as 'data that is not readily changeable.'")(emphasis added); *In re Marosi*, 710 F.2d 799, 802 (Fed. Cir. 1983)(Miller, J.)(quoting *In re Okuzawa*, 537 F.2d 545, 548 (CCPA 1976))("It is well established that 'claims are not to be read in a vacuum, and limitations therein are to be interpreted in light of the specification in giving them their 'broadest reasonable interpretation.'"); *In re Ehrreich*, 590 F.2d 902, 907 (CCPA 1979)(Rich, J.) (citing *In re Okuzawa*, 537 F.2d 545, 548 (CCPA 1976); *In re Royka*, 490 F.2d 981 (CCPA 1974)) ("Claim language is to be given its broadest reasonable *interpretation in light of the specification*.")(emphasis added); *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997)(on reconsideration)(Plager, J.)("Some cases state the standard as 'the broadest reasonable interpretation,' see, e.g., *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed.Cir.1993), others include the qualifier 'consistent with the specification' or similar language, see, e.g., *In re Bond*, 910 F.2d 831, 833 (Fed.Cir.1990). Since *it would be unreasonable for the PTO to ignore any nterpretive guidance afforded by the applicant's written description*, either phrasing connotes the same notion: as an initial matter, the PTO applies to the verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of **ordinary** skill in the art, *taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant's specification*.")(emphasis added); In re *Khayrallah*, 594 Fed.Appx. 666, 669 (Fed. Cir. 2014)("T*he specification nowhere expressly defines 'sub-signal,'* and [applicant] Khayrallah has failed to explain how the broadest reasonable interpretation of that term cannot include the wideband signal impaired during propagation.")(emphasis added).

C. A few, Well Crafted Original Claims

An applicant should, of course, draft reasonable claims that are definite, without fatal ambiguities. As a backup, however, the Patent Examiner should be able to catch problems that render the claimed invention indefinite. The catch, however, is that if the applicant presents too many claims and too many prior art issues, the Examiner will not be able to do *everything* in his first Office Action within his strictly allotted production goals. While the Examiner will do the best job he or she can to search for and apply the best prior art, an application with far too many claims may very well not receive the complete examination that should take place. This results all too often in the patent being granted in part because the Examiner ran out of time to check the formalities in the detail that is expected.

The prophylactic against this happening is to make sure that the best prior art is cited by the applicant in an *Information Disclosure Statement*, particularly where that best prior art is not buried in a lengthy list of prior art references; and, a *reasonable* number of claims should be presented supported by definitions in a *Summary of the Invention*.

D. "Claim Flooding" must be Avoided

Best practices involves the presentation of all *necessary* claims but avoidance of presenting claims merely because one has the right to present an unlimited number of claims (with an additional claims fee). Beyond the ambiguities that may creep into a presentation of, say, dozens of claims, if one presents more claims than can be dealt with by an Examiner in a reasonable period of time, the most likely outcome is that while the Examiner will focus on novelty and nonobviousness search and examination a hopelessly jumbled set of, say, thirty or forty claims will lead to the Examiner *ignoring* subtle formalities errors that otherwise would be caught if the original application had, say, ten or fifteen claims.

XIII. CONCLUSION

At some point before the end of June 2018 the Supreme Court will in the *Oil States Energy* case will determine whether or not the current post-grant system to challenge patents at the Patent Office is constitutional. At that point, the patent community must decide whether to move forward with various reforms to strengthen the patent system.

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About the Author

Prof. Wegner's practice includes expert opinions; he also develops strategies on complex claim drafting and prosecution matters at the Examiner level and at the Board and the Federal Circuit.

Professor Wegner's professional roots are in chemical patents, and particularly pharmaceuticals. After receiving a degree in chemistry from Northwestern University he spent four years as a Patent Examiner focused on claims to new compounds, and thereafter spent many years in private practice where a principal specialty was pharmaceutical patent law.

Westlaw has recently published the author's treatise:

FIRST TO FILE PATENT DRAFTING: A PRACTITIONER'S GUIDE (Thomson Reuters 2017), http://legalsolutions.thomsonreuters.com/law-products/Treatises/First-To-File-Patent-Drafting-2017-ed/p/104366885.

The work is also available electronically on Westlaw.

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