

From:

Sent: Monday, March 08, 2010 4:12 PM

To: patent_quality_comments

Subject: Response to Request for Comment on Patent Quality

Attention: Kenneth M. Schor and Pinchus M. Laufer

Gentlemen:

Attached under cover of a brief letter to the Office is my personal response to the PTO request for comment on patent quality.

Thank you for the opportunity to comment.

Sincerely,

JOHN K. ROEDEL, JR.

SENNIGER

POWERS

SENNIGER POWERS LLP

100 N. BROADWAY, 17TH FLOOR

SAINT LOUIS, MO 63102

314.345.7001 V

314.231.4342 F

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JOHN K. ROEDEL, JR.
SENNIGER POWERS LLP
100 NORTH BROADWAY
17TH FLOOR
ST. LOUIS, MISSOURI 63102
314-345-7001 (DIRECT)
866-291-7067 (TOLL FREE)
JROEDEL@SENNIGER.COM

March 8, 2010

VIA ELECTRONIC MAIL

TO: patent_quality_comments@uspto.gov

Mail Stop Comments - Patents, Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Attention: Kenneth M. Schor and Pinchus M. Laufer

Gentlemen:

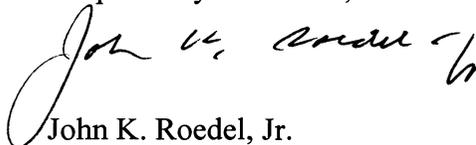
Attached is my personal response to the request for comments on patent quality, Federal Register, Vol. 74, No. 235, p. 65093, December 9, 2009.

As spelled out in the preamble of the response, this document reflects only my personal views, and does not reflect the opinions of my firm, Senniger Powers LLP, or of my partners, or of any other institution or corporation with which I have been affiliated in the past.

If anyone in the Office has any questions on any fact asserted or opinion offered in the response, I would be happy to discuss either by phone, in writing, or for that matter in person.

Thank you for the opportunity to offer my views, which have developed from over 40 years in the patent profession and over 50 years in the field of technology.

Respectfully submitted,



John K. Roedel, Jr.
Reg. No. 25,914

Quality Examination and Prosecution

Preamble

This is a personal submission of John K. Roedel, Jr., Senniger Powers LLP, St. Louis, MO 63102 in response to the PTO request for comments on measures to improve overall patent quality, as published December 9, 2009 in the Federal Register, Vol. 74, No. 235 at p. 65093.

The opinions expressed herein are based on 40 years of experience in the practice of patent law with the firm of Senniger Powers, preceded by 10 years industrial experience as a chemical engineer with Monsanto Company at its manufacturing facility in Sauget, Illinois.

For 12 years, from 1993 through 2004, I also taught the course in Patent Law at the St. Louis University Law School.

My opinions reflect practice in all phases of patent law, including litigation, prosecution, licensing, due diligence, counseling, opinions, and expert witness testimony. They further reflect my teaching experience, as well as real world experience in an engineering role adjunct to heavy chemical manufacturing.

They are strictly my personal views, and are not the opinions of Senniger Powers or of other partners in the firm (nor, of course, do they represent the opinions of either St. Louis University or the Monsanto Company).

I. Category 1 - Quality Measures Used

Set out herein is a list of criteria for quality patent applications which is intended to respond to the PTO request for indicia of a quality patent. The response stops short of suggesting that there are quantifiable metrics by which to measure compliance with these criteria. The patent preparation, patent prosecution and enforcement processes have too many variables to allow such metrics to be meaningful.

Perhaps metrics could be established based on the reports of court decisions on patents which are litigated. But one of the problems that plagues patent quality is the exceptionally low percentage of patents that are ever litigated and the long lag time that prevails between the grant of a patent and a definitive decision on its validity and/or coverage. This reality tempts applicants and their attorneys to cut corners in drafting applications and to accept coverage that is less effective and reliable than should be available to the applicant under the law.

In further response to the request for comment, I have definite opinions on the key items that are carried out by the USPTO and the applicant that bear on quality, and the reasons why patent quality is not what it should be. I also offer opinions on remedies that are needed by applicants, their attorneys and the PTO to improve patent quality.

This response: (1) starts with the objectives which define the need for quality; (2) provides a capsule summary of legal principles and developments that bear critically on the topic; (3) lists criteria for a quality patent application and quality prosecution; (4) discusses the deficiencies that prevail in the preparation and prosecution of applications by the applicants and their attorneys; (5) discusses deficiencies in examination by the PTO; and (6) concludes with recommendations for what is required to increase patent quality.

A. Objectives

Those with an interest in the patent system include inventors, the PTO, investors in research and technology, competitors of patentees, and the general public. The public has an interest in the competing objects of progress in technology vs. free availability of products of invention at the lowest price. To meet these competing interests a quality patent should meet several pivotal objectives:

1. notice to the public and to the competition of the scope of patent rights;
2. dissemination of novel technology, i.e., to "Promote the Progress of the Useful Arts;"
3. grant of claims having a scope commensurate with the contribution to the art; and
4. protection and encouragement of investment in research.

Among these objectives, the third is of critical importance to the others.

B. The Law

Recent trends in the patent law have increased dependence on the well drafted and prosecuted patent application as the instrument to protect innovations and promote investment in research. Since patents cannot be amplified or amended in litigation, protection depends on the well drafted and prosecuted patent application.

*KSR v. Teleflex*¹ has placed a greater burden on the applicant to demonstrate to the Examiner that the invention as claimed represents a non-obvious departure from the prior art. The *Festo* series of decisions has sharply curtailed the patentee's ability to invoke the doctrine of equivalents.² In drafting and prosecuting the application, applicants and their attorneys must be prescient if not omniscient in recognizing

¹ 550 U.S. 398, 127 S.Ct. 1727 (2007)

² The definitive Supreme Court decision is *Festo v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 122 S.Ct. 1831 (2002). The decision of the Federal Circuit on remand is reported at 344 F.3d 1359, 68 USPQ2d 1321 (2003). The Federal Circuit's ultimate decision on "foreseeability" as creating an absolute estoppel is reported at 493 F.3d 1368, 83 USPQ2d 1385 (2007).

competitive alternatives that may employ the principles of the invention, and craft claims which literally cover these while still satisfying the stringent demands of *KSR*.

As stated long ago by the Supreme Court:

"The specification and claims of a patent, particularly if the invention be at all complicated, constitute one of the most difficult legal instruments to draw with accuracy, and in view of the fact that valuable inventions are often placed in the hands of inexperienced persons to prepare such specifications and claims, it is no matter of surprise that the latter frequently fail to describe with certainty the exact invention of the patentee, and err either in claiming that which the patentee had not in fact invented, or in omitting some element which was a valuable or essential part of the actual invention," *Topliff v. Topliff*, 145 U.S. 156, 171, 12 S.Ct. 825, 831, 36 L.Ed. 658, 664 (1892). (emphasis supplied)

The problem of obtaining literal coverage is further complicated by recent decisions imposing increasingly restrictive written description requirements for support of claims added during prosecution. And in a reverse twist on the written description issue, the 2001 *Scimed* decision and a dozen or so others have restricted the scope of claims by importing limitations from the specification, thus finding non-infringement even where the claim appears to literally cover the competitive product.

The problem of definitive literal claim scope does not end with selecting combinations of features that will clear the art yet read on the competitor's product or process in the context of litigation. In both prosecution and litigation of the claim, an individual claim term may as readily be the source of mischief when found to be too broad or too narrow. A long-standing principle holds that a claim should be given its broadest construction by the PTO during examination for novelty, non-obviousness, and §112 support. Recently, the PTO has been aggressively invoking this principle to the consternation and more than occasional embarrassment of a good number of applicants. Sometimes a subtly narrower expression is categorically intended, other times the narrower expression is useful to provide a judicious retreat. Exquisite precision of language is called for here so that the Applicant claims "just enough, but not too much."

Thus the patent application is a crucial legal instrument which must be drafted with exceptional perspicacity and care in order to define the invention without encroaching on the art, or prematurely dedicating the invention to the competition.

C. Meaning of "Quality"

When critics of the patent system speak of quality, they are not talking about the quality of a patent or patent application as a legal document. Nor are they talking about the proficiency with which the application is prosecuted. Directly or indirectly, they are talking about the quality of examination, more particularly the laxity thereof, by expressing their perceptions of the quality of inventions that slip through the PTO filter. The *KSR* decision addressed and largely accepted the criticism that too many inventions

which have passed through the filter are unworthy. Implementation of the *KSR* standard in the PTO may not be culling out all the unworthy inventions, but the mounting backlog of appeals suggests that the PTO is taking seriously the responsibilities emphasized by the *KSR* decision and opinion.

However, it is my understanding that the Federal Register request is not addressed to the §103(a) standard alone, but to the quality of the patent as a legal instrument, the quality of the patent application on which the patent issues, the competency of the examination, and the competency and professionalism of patent prosecution. In short:

1. does the process meet the objectives identified above? and
2. does the patent as issued comply with established legal standards?

D. Ultimate Criteria for the Claims

In my opinion, the principal criteria for evaluating the quality of patent claims, and thus the claims submitted with the application or offered in prosecution are the following:

1. the claims are definitive and provide the public with clear notice of the metes and bounds of the right to exclude;
2. the best art has been identified and the claims distinguish this art with respect to novelty under §102;
3. the claims are crafted consistently with the scientific and engineering principles on which the invention rests;
4. the claim structure includes adequate quantification of parameters that are result effective and/or which distinguish non-analogous art;
5. to the extent the prior art allows, the claims are drafted to literally cover competitive alternatives that are based on the same scientific and engineering principles as the specific embodiments made or described by the inventor;
6. the claims are consistent with the current state of the law on issues of statutory subject matter and utility;
7. the claim structure is of sufficient depth, and sufficiently graduated in defining novel combinations and permutations of elements, to: (a) allow the examination process to tailor the scope of coverage granted to the merit of the invention; and (b) preserve a reasonable scope of coverage against the vagaries of undiscovered prior art and variability in the ultimately subjective obviousness standard as applied by different Examiners, triers of fact, and arbiters of law.

8. in particular, the claim structure includes adequate tiers of progressively narrower subgeneric scope so that the ultimately granted claims can be commensurate in scope with the invention, even when previously unidentified prior art is encountered during prosecution.

9. the claims define an invention for which at least a defensible case for non-obviousness can be made under the *KSR* standard, assuming the inventor to have the burden; and

10. the claims comply with the letter and spirit of Rule 75 (except that it rarely should be necessary to define the invention in terms of Jepson claims as recommended in Rule 75(e)).

E. Ultimate Criteria for Quality with Regard to the Specification

Criteria for evaluating quality of the specification include the following:

1. the specification is well organized and describes the invention in lucid prose consistent with the nomenclature of the relevant art;

2. the specification is composed in contemplation of the most relevant known prior art and spells out features and combinations of features which distinguish that art;

3. the specification provides complete, literal and unambiguous support for all claims;

4. the specification describes the invention accurately with respect to underlying scientific and engineering principles;

5. the specification is complete and accurate in its description of technical details that are relevant to the differences between the claimed invention and the prior art;

6. the specification is complete and accurate with respect to description of the interrelationships and interactions of parameters that characterize inventive structures and methods;

7. there is adequate quantification of parameters which are result effective;

8. the specification uses definitions judiciously to specify the meaning of terms that are otherwise ambiguous, or where a term is intended to have a nuanced meaning slightly narrower or slightly broader than it might be construed in other contexts;

9. the specification is drafted consistently with the state of the law on statutory subject matter and provides adequate explanation of utility;

10. there is adequate disclosure of illustrative embodiments and working examples;

11. where the claims define the invention in terms of an empirical test, the specification definitively specifies the test protocol and conditions;

12. the specification complies with Rules of Practice 71-73.

F. Metrics

From the nature of the criteria listed above, it is apparent that attempted quantification of quality criteria will at best be difficult, at worst misleading.

Set forth below are the central problems that, in my opinion, are adversely affecting the quality of patent applications, the competence of examination and the caliber of prosecution. Except for the point relating to Information Disclosure Statements, these problems do not lend themselves to reliable quantification any more than the indicia outlined above.

Discussion of these problems could suggest some metrics that might statistically correlate with quality, but would not reliably correlate in any particular application or examination.

G. Problems as I See Them

In my opinion, there are five general problems that adversely affect the quality of patents issued by the PTO, three the responsibility of applicants, one the responsibility of the PTO, and the last shared by the USPTO and foreign patent offices:

1. commoditization of patent applications;
2. minimalist drafting and prosecution;
3. banker box Information Disclosure Statements;
4. incompetent examination; and
5. arbitrary procedural restrictions

I offer comments on each of these below

1. Commoditization

In my opinion, too many clients have been led to believe that a patent application is a standardized quasi-fungible product that can be prepared within a low, consistent, invariant and predictable expenditure of time without any tradeoff on quality. As a result

of intense price competition, the quality of patent applications has suffered. Applications are hastily drafted, without proper consideration of prior art, without sufficient depth of disclosure, without adequate dialog with the inventors, without proper understanding of the invention or underlying scientific principles, without sufficient exploration of competitive alternatives, without critical review by a competent experienced practitioner, and without even adequate proofing.

Preparation of a patent application properly disclosing and claiming the invention is an organic process comprising a dialog between attorney and inventor probing the nature of the invention, how it works, the physical, chemical and/or biological principles on which it is based, what problems were faced and overcome, and what its limitations are, all considered in light of the known prior art, the differences between the invention and the art, and the scientific and engineering alternatives available to the competition. Properly conducted, the process is comparable to peeling an onion, and nearly always develops much more useful technical information than the written disclosure on which the application is based, even if that disclosure is relatively extensive and written by an inventor with patent experience. Where a proper attorney/inventor dialog is conducted with an eye on the most relevant art, an understanding of the invention emerges which may have been completely missed in the original invention disclosure document.

As a result of this collaboration, the attorney and client can develop a graduated claim structure that provides maximum assurance of value to the client, and a supporting specification that disseminates solid useful technical information to the public. The result is to promote investment in the invention by the client or its licensee, and to promote the progress of the useful arts through the detail, accuracy and sophistication of the specification.

Commoditization truncates this process, deterring the attorney from adequately investigating the invention, from fully communicating with the inventors, and from adequately considering the prior art. Instead, the attorney is driven to merely regurgitate the description provided by the client, tack on a short set of claims based on what he finds in the disclosure, and cast the patchwork result into the lap of the Examiner. Often the claim structure is characterized by very broad claims that are unlikely to survive competent scrutiny and very narrow claims that do not cover alternative embodiments which should have been apparent to a careful practitioner who has pursued a serious investigation of the nature of the invention and the principles on which it is based.

The resulting applications are deficient in providing a basis for tailoring the scope of protection to the merit of the invention. Where the most relevant art is not found during examination, claims issue that are plainly invalid, and where the best art is found, the client is relegated to narrow claims that do not provide the scope of protection to which he is entitled. And the public is deprived of what the inventor really did that was an advance in the art.

When price is the main object, drafting is typically committed to inexperienced attorneys without understanding of the technology and/or the law, or to technical writers

who may understand the technology well but have even less knowledge of the law, the implications of the legal process, or the way to provide written description support for an adequate array of subgeneric claims. Deficiencies can be corrected when the draft is carefully reviewed and revised by an experienced attorney knowledgeable of the law, the technology, the market, the prior art, PTO practice, and so on. But if the guaranteed commodity price is to be met, review by an experienced prosecutor is unavoidably hasty and superficial.

Sophisticated clients are aware of the tradeoff between quality vs. price, and some may knowingly do the cost/benefit analysis and conclude that patents of compromised quality are nonetheless optimal for their business interests. For example, given a fixed budget for patent application work, some clients may prefer a higher number of patents of indifferent quality to a lesser number of patents of higher quality. This is a judgment they are entitled to make, it may even be accurate in their particular circumstances, and there is nothing that can or will be done to change it.

Unfortunately, many clients are not aware of the tradeoff and are unable to independently evaluate the quality of their patent applications and patents until the event of litigation or licensing negotiations, when it is too late. They depend on their attorneys to guide them with regard to time and effort required to prepare a quality application, and the attorney experience and expertise required for the task. In my personal opinion, they are too frequently misled.

Regardless of whether superficial applications are submitted through conscious informed choice, or lack of understanding of the tradeoffs, there is prejudice to the public dissemination function through which the statutory scheme is designed to promote the progress of the useful arts.

Frequently, products and processes that are novel and meet the test of commercialization superficially appear to reflect only routine skill and lack inventive input. Courts skeptical of the patent system make sport of such inventions in their critique of PTO performance. However, it is often not the invention that is lacking, but its definition and description in the patent that is at fault. For while novel products and processes which have overcome the barriers to commercialization usually have a seriously innovative core, that core can be elusive. Consequently, the real innovative contribution can be entirely missed by a patent application that merely regurgitates client invention disclosures without adequate probing by attorneys and inventors to get at the core, including problems met and overcome in development of the product. The real contribution is also prone to be missed by applications that are prepared without adequate searching, and without confronting the inventors with close prior art references which force enough layers of the onion to be peeled away to reveal the real contribution to the art, to describe that contribution for the benefit of the public, and to claim it for the benefit of the client.

Another casualty of commoditization is adequate proof reading. Proofing of a patent application in a serious art is not a mere matter of editing for spelling and syntax.

It is matter of technical accuracy, depth, and precision. Precision of description is elusive even when there has been sufficient investigation to identify the core innovation. Careful proofing by both inventor and attorney is necessary to provide claims and descriptions which are not only definitive and technically accurate, but which properly capture the critical differences between the invention and the prior art. Sometimes only modest editing is necessary, but more often major rewriting becomes necessary to properly describe and define the invention with all significant nuances. Commoditization cuts off this process.

The PTO is confronted with the consequences of all this: poor quality applications from sophisticated enterprises whose strategies do not require consistently high quality cases; and poor quality applications from unsophisticated businesses and inventors who have been drawn to commodity pricing.

2. Minimalist Drafting and Prosecution

Given the double impetus of the Federal Circuit motivation test and the *Scimed*³ line of cases, in which limitations have been imported from the specification into the claims, attorneys have been taught by experts to say as little as possible about the particular advantages of the invention, much less the relationship between structure and performance. Why there is an invention and what it is become camouflaged in antiseptic prosecution.

Although there are authorities which have barred or limited consideration of properties or advantages not disclosed in prosecution on patentability under §103, *Carter-Wallace v. Otte*, 474 F.2d 529 (2d Cir. 1972), *Graham v. John Deere*, 383 U.S. 1 (1966), and even authority requiring that such advantages have been disclosed in the specification, *in re Davies*, 475 F.2d 667 (CCPA 1973), *in re Wertheim*, 191 USPQ 90 (CCPA 1976), more recently the Federal Circuit has held that the Examiner must always consider evidence of advantageous results, *in re Chu*, 66 F.3d 292, 36 USPQ2d 1089 (Fed. Cir. 1995). Relying on the rule in *Chu*, applicants feel safe in avoiding description of properties, benefits or advantages in the specification. Where the applicant successfully invokes the motivation test, any need to focus on the real advance in the art is also avoided during prosecution.

In rejecting rigid application of the teaching, suggestion or motivation test, the Court in *KSR* has probably increased the frequency with which applicants will need to resort to evidence of benefits and advantages during the course of prosecution. However, under current practice, there is still little incentive to elaborate on these in the specification; and there are disincentives arising from the court decisions limiting claims by features imported from the specification.

Thus, with regard to antiseptic prosecution, there are quality objectives which conflict, in many cases irreconcilably so. An application which is high quality, in the

³ *Scimed Life Systems v. Advanced Cardiovascular Systems*, 242 F.3d 1337, 58 USPQ2d 1059 (Fed. Cir. 2001)

sense that the scrivener has adroitly avoided committing his client on the necessity or importance of any of the various features of the claims, may be commensurately low quality in adequately placing the real invention in the possession of those skilled in the art.

However, in minimalist prosecution, the applicant and attorney may still become victims of their own success, e.g., where the application sails through with no need to ever identify particular benefits, advantages or applications of the product or process claimed. Trial courts can still look to *Graham* in dismissing arguments that look like afterthoughts.

3. Banker Box IDSs

Fear of fraud charges leads to identification of an excessive number of references in Information Disclosure Statements. The truly relevant art becomes buried in the muck.

Of course, such excessive disclosures of art are also perceived (and perhaps sometimes accurately) as a form of fraud in themselves. In this respect, it is commonly alleged that the relevant art has been buried intentionally.

In complex technologies, all this confronts client and attorney with a dilemma, which is almost always resolved in favor of too much disclosure rather than too little. The Examiner is then confronted with giving short shrift either to the IDS, e.g., by restricting his review to abstracts only, or to his own searching in order to consider the submitted art and get an action out within the minimal time allotted him.

4. Incompetent Examination

More than ever before we are encountering examiners who appear to have little or no understanding of the claimed invention, and little or no understanding of the prior art references, much less the differences between them wherein the invention lies, or doesn't. May I hasten to add that the majority of Examiners do not fit this category, but the number that do is more than negligible.

Some of these Examiners may simply be apathetic, but most seem diligent and eager to conduct a proper examination. They are simply out of their depth.

Whether such Examiners are properly applying the law is obscured by their lamentable failure to grasp the facts. There are certainly many instances where the law is not properly applied. But given the vagaries of CCPA and Federal Circuit precedent on §112 issues, especially written description and to some extent enablement, Examiners might be forgiven if they do not always get it right on the law. Practitioners struggle with these issues also, along with the Office and the courts.

But there is no excuse for the Office assigning Examiners who cannot read a claim, cannot read a reference, or have no relevant technical expertise or industry

background in the first place. Nor is there any excuse for Examiners who are too indolent or inattentive to gain an understanding of the claimed invention or the art. From our experience, the problem is more with the qualifications than the diligence of the Examiners. When we talk to them, they seem determined to understand the claimed subject matter and how it relates to the art, but too many of them simply lack the background and/or the ability to do so.

Language is an additional problem. The practice of law generally, and especially of patent law, demands precise written and oral expression, and therefore not just an average command of the language in which transactions are conducted, but a superior command of that language. This applies equally to the adjudication function exercised by the Examiners. The inventor cannot be fairly treated, the public properly protected, or the progress of the arts advanced where prosecution is in the hands of an Examiner who, whatever his technical capabilities, can neither express himself in the English language nor understand what the applicant and his attorney are saying.

Lack of language facility unavoidably spills over to imprecise and inaccurate application of patent law principles.

The growing number of appeals should not be considered *per se* as a symptom of incompetence. The Office is unavoidably in a state of transition adapting to the relatively demanding but confusing standard enunciated (or not) by the Court in *KSR*. Applicants too are feeling their way in testing the standard. Appeals are the process through which a new balance should ultimately emerge.

However, I suspect that at least some material fraction of these appeals do not result from differing understanding of *KSR*. Instead, they are taken from rejections made by Examiners who simply failed to understand either the invention as defined by the claims, the prior art references cited against them, or even the general area of technology to which the invention pertains.

5. Procedural Restrictions

Given the vagaries of the art and the variability in the ultimately subjective standard of inventive step, a closely graduated claim structure is generally called for to provide a basis for ultimately tailoring the scope of protection to the merit of the invention. In turn, this requires a detailed specification with explanation of the relationships among the combinations and permutations of parameters that make up the invention.

For reasons that are understandable in purely bureaucratic terms, the patent offices around the world dislike detailed, sophisticated applications, but rather prefer short, sweet, simple minded documents that create less work. The EPO has led the way downwards in this respect, generally refusing to examine more than one independent claim, even where unity of invention objections cannot be made; and it has recently imposed prohibitive fees on the presentation of more than a relative handful of claims,

and complemented these restrictions with further exactions for submission of specifications beyond an arbitrary number of pages. All of this effectively prevents the applicant from presenting a properly graduated claim structure to which not only the Examiner and the applicant, but a tribunal adjudicating an infringement action, can refer in properly tailoring the scope of enforceable protection to the merit of the claimed invention.

Perhaps because Continental States lack a tradition of judicial review, the EPO may see itself as the ultimate gatekeeper of the public interest in a way that the USPTO is not. But the EPO's response to this reality is not to undertake the labor needed to match scope of coverage to the intrinsic value of the invention, and thus to deal with the complexities that this demands, but rather to set up arbitrary road blocks which "dumb down" the process and avoid a serious effort to arrive at a balanced result. Whether this attitude may reflect re-distributionist impulses in European politics is beside the point. Whatever else it does, it does not encourage either the creation or dissemination of new technology.

The USPTO seems to be increasingly influenced by the attitudes and arbitrary limitations imposed by the EPO. In the worst manifestation of this tendency, the Office in 2007 attempted to impose draconian limitations on the number of claims that could be presented in an application, and to prematurely shut down the course of prosecution often necessary for working out the balance between the scope of exclusive rights and the merit of the invention under examination. Although applauded by those whose agenda is to curtail patent rights, this attempt to "dumb down" the patent system would have had a devastatingly adverse effect on the incentives to invest in serious research, and in the commercialization of the fruits of research.

The Office has wisely withdrawn these rules. It can be hoped that this will signal a return by the PTO to fully accept its responsibilities for examination, and not to throw roadblocks in the path of those applicants who take seriously the role of patents in promoting the progress of the useful arts.⁴

H. Some General Thoughts on Remedies

1. At the Applicant's End

A patent application must be understood as a relatively complex legal document that must be drafted with understanding of: (i) the nature of the invention; (ii) the technology in which it falls; (iii) the prior art; (iv) the scientific and engineering principles on which the invention is based; (v) alternative embodiments including

⁴ In the controversy over the recent round of major rules changes, it did not seem that the persons responsible for crafting the rules had adequate familiarity with the prosecution process to understand the strategies the attorney for an applicant must follow in order to assure that significant aspects of the innovative contribution made by the inventor are not "left on the table." The vigorous outcry against those rules was spurred by a real risk of forfeiture which the PTO drafters had not seemed to either anticipate or comprehend.

commercially viable alternatives available to the competition; and (vi) the requirements of the law, including patentable subject matter, inherency, obviousness, enablement, written description, infringement, contributory infringement, etc.

The preparation of the application should not be treated as a routine task that can be competently completed in an arbitrarily limited and compressed period of time, or by inexperienced practitioners within any period of time. The claim structure in particular should be adequately graduated, including sufficient tiers of subgeneric coverage that provide backup positions which preserve protection of the invention commensurate with its merit.

Whatever price is quoted for the application, clients should demand that the claims and the specification fully develop the innovative features and combinations that characterize the invention. Patent experienced inventors can recognize when the application gives short shrift to what they have done, and should insist that the text be complete and absolutely technically accurate.

Preferably, preparation of the application should be preceded by adequate searching which identifies the most relevant art, and that art should serve as a foil for the preparation of the application. In depth dialog with the inventors should both precede and continue through the preparation of the application. Hard estimates of cost should preferably be reserved until there is a full understanding of the art and the details of the invention on the part of the scrivener.

The application should either be prepared by experienced professionals adequately acquainted with the relevant technology and the scientific and engineering principles on which the technology is based, or closely reviewed and revised by such experienced professionals. The person drafting or reviewing must also have intimate knowledge of the law, especially as construed by the courts under §§102, 103, 112, 271, etc.

Attorneys should be candid and honest in counseling clients on the value of a patent application vs. the cost of preparation, and explore with the client what he needs and expects to gain from the disclosure of his innovations in the patent process. For a given budget, and for a client whose competitiveness depends on the value of its patent rights, it will often be better to file fewer applications of high quality than to plague the Office and the art with multiple applications of indifferent quality or worse. Fewer better applications should also yield savings in prosecution and foreign patent filing costs.⁵

Prosecution of the application should be conducted by an experienced professional with the qualifications indicated above, or at least closely supervised by such an experienced prosecutor. Here also, attorneys should be honest in counseling clients on the time, evidence, and other resources required to deal adequately with the art and the rejections.

⁵ And in US and foreign maintenance fees, although this advantage may be offset in part by restriction requirements and unity of invention objections.

Attorneys and clients alike must be scrupulously candid in bringing relevant art to the attention of the Office. They must recognize that, in addition to ethical obligation to do so, bringing out the most relevant art in prosecution is the most effective way to obtain protection of a nature that will be enforceable and therefore have competitive value.

But judgments need to be made, and some element of risk accepted, in submitting IDSs that are helpful to the Examiner rather than burying him or her in a mountain of information that cannot reasonably be explored in the unduly truncated time available for the examination.

2. At the PTO End

Selection and training of Examiners needs improvement. One measure that should be helpful is to require a period of industrial and/or research experience for entry level examiners. Perhaps 2-5 years plus a top 25% or top 15% academic record. The current failure of many Examiners to understand the prior art, the technology, or the nature of the invention as claimed appears to be attributable to their lack of relevant experience. The Office should be open to hiring even more experienced technical professionals with credit for additional experience, up to 10 years.

Not only will industry-experienced Examiners have a better grasp of the invention and the art, they will have the background for understanding the level of skill in the art, which can be entirely outside the ken of Examiners hired directly after graduation with no practical experience. Even when he understands the claimed subject matter, the inexperienced Examiner tends to swing to one extreme or the other, to be either unduly impressed by inventions of technical complexity despite lack of novelty, or to underrate the insight required to conceive the seemingly modest but significant advances that most patentable inventions represent. A significant minority of Examiners seem to be so lost as to the technology that they are incapable of forming a coherent Office action or having a personal interview with any meaningful interaction.

The PTO should also recognize the opportunity to lure higher quality, experienced people by hiring outside the D.C. area. The pay scale and local job markets in the Midwest and elsewhere should allow the Office to get a better return on its employment dollar. Remote access by Examiners should make this relatively easy to implement, and the GS level pay would attract more experienced candidates in a locale with a lower cost of living.

Searching, of course, is the backbone of examination. Greater collaboration among national and regional patent offices in adapting advances in digital technology to the search function should pay off. I have no specific proposals on how collaboration can be further advanced. But where an application is destined for filing in plural jurisdictions, perhaps there is a way that the search conducted by the International Searching Authority could be pressure tested by other first line patent offices that will ultimately be called upon to examine the application. Of course, the best searching

technology cannot pay off unless the Examiner conducting the search can understand the claimed invention so that he knows what he is looking for.

The PTO should allow and encourage pre-action interviews which enable the Examiner to get answers to questions on the nature of the invention and how it differs from the art, and to allow applicants and their attorneys to provide background information and explanations of the invention in a relatively informal context before the formal examination process begins. Steps already taken by the Commissioner in this direction should be applauded, cultivated and expanded. The Examiner may often find it useful to conduct a supplemental search after such pre-action interview.

It may be desirable for the PTO to limit the number of references that can be cited in IDSs without explanation of the need for such, or perhaps at least categorizing the references with respect to their general areas of relevance. However, no burden should be placed on the applicant to identify the "closest reference," or to explain or distinguish individual references unless and until they have been made the basis of prior art rejections.⁶

If the PTO is not already doing so, it may be useful to conduct case studies on patents that have been litigated, especially those that have been invalidated, and integrate these into Examiner training. For purposes of general training, this can be done in a way that treats the problems as illustrative without exposing individual Examiners to unnecessary personal criticism. More intensive post mortems with the individual Examiner could also be useful in aggravated cases, but the purpose would be to help all Examiners recognize the significance of their work and the importance of getting it right.

Getting it right does not mean simply that the Examiner should have rejected the claim so a court did not need to invalidate it. Getting it right means tailoring the scope of coverage to the merit of the invention. Where the Examiner recognizes that an invention resides in the disclosure, attorney and Examiner should collaborate in a reasonable if adversarial dialog to adjust the coverage to the invention. But, of course, where a knowledgeable Examiner concludes there is no invention, he should stand his ground rather than succumbing to ant-like persistence of the applicant's attorney.

In the training regimens suggested above, the deficiencies on the part of the applicant should not be spared. In case studies, it should be pointed out where the applicant has misled the Examiner, where the fault was in a technically inaccurate, sketchy or otherwise imprecise application, etc. Examiners should be encouraged to demand precision and technical accuracy from applicants, and to resolve patentability issues against applicants whose submissions are vague or inaccurate.

II. Category 2 - Stages of Monitoring

⁶ Practitioners nonetheless live with the reality that inventive step analysis in the EPO will require them to identify the closest reference as the starting point for "problem/solution" analysis. US prosecution may come earlier, but the implications of representations later made to the EPO will need to be foreseen and accommodated during US prosecution.

Since I do not believe that the quality of patent applications can be realistically quantified, i.e., I have not identified useful metrics, I have consequently not identified stages of the process at which any measurement should be attempted. But that does not mean that quality cannot or should not be evaluated at each of the stages that are enumerated in the PTO request for comment. Among these, certainly stage (2) when the initial search has been completed is a critical point, as is stage (3) when the first Office action has been drafted. If the Examiner has misunderstood the invention and chased the wrong art, and/or misunderstood the art he has found, examination may head off in a wrong direction from which it may never return. Each of the other five stages is a reasonable candidate for monitoring quality, especially stage (6) when a final Office action has been drafted, but at some of these stages there may not be anything that can be done.

The request for comments says that:

"it seems credible that increasing quality in the early stages would be the most effective in reducing pendency, and USPTO is seeking comment on this hypothesis." (74 F. Reg. 65095)

Of course to the extent that quality breaks down at the applicant's end in the drafting stage, the "early stages" of examination are already too late.

But closer supervision is apparently a problem in the Office just as it is in the preparation and prosecution of commoditized patent applications.

The request for comments asks for input on the timing of the USPTO's assessment and reporting of various measures of quality in relation to the stages of monitoring. It is unclear from the request who the recipient(s) of such reports should be, or how the information would be used. If the reports were made of record in the application file, or were otherwise subject to discovery in litigation, they could become prejudicial to the patentee. The Office can properly critique the quality of the preparation and prosecution of the application only by making rejections that are supported by statute. Critique of the quality of examination can be usefully be made at each of the enumerated stages which reflect Examiner performance, provided that the reports are kept off the public record and the PTO resists discovery of such reports during the course of patent litigation.

III. Category 3 - Pendency

Realistically, it will be difficult to improve quality without extending pendency unless experienced manpower in the examiner corps is increased. Applications and applicant submissions need more scrutiny not less, both to identify what is meritorious in them and what is not.

I do not believe that quality is compromised by the time honored practice of accepting claims of lesser scope than the applicant believes himself entitled in order to

provide some scope of coverage, then following that with a continuation as a vehicle for further prosecution or appeal of broader claims. There may have been a legitimate public notice problem with this practice when all applications were maintained in secrecy until grant, but not a quality problem as such. Under the current practice there is neither a quality nor a public notice problem. However, where the process is abused, e.g., by unreasonable or unexplained delay, repetitive redrafting claim as an obviously dilatory tactic, etc., the PTO retains authority to make rejections for prosecution laches, *in re Bogese*, 303, F.3d 1362 (Fed. Cir. 2002).

With the exception of those circumstances where the system is gamed for unreasonable delay, quality should be enhanced by the practice of allowing relatively narrow claims to issue which have satisfied vigorous examination, while giving the Examiner or the Board time for mature consideration of the case for patentability of broader claims.

Permitting the applicant to pursue a broader continuation does not mean the Office has to allow it. In many cases, the broader continuation may require an appeal. Unless the applicant has new evidence, or can offer new insights on the invention or the art, there is no reason for the Examiner to collapse from fatigue. If the invention is important enough and the applicant believes in his position, that's what the Board of Appeals is for.

IV. Category 4 - Pilot Programs

Unfortunately, I have had no experience with these programs and cannot offer comment.

V. Category 5 - Customer Surveys Regarding Quality

Customer surveys have been useful. But the current request for input on patent quality should generate more thought and serious contribution than the surveys.

VI. Category 6 - Tools for Achieving Objectives

Software is not my field. All of the various tools listed in the request for comment look valuable, or at least interesting. But I would tend to be wary of "claim analysis tools." It is important to maintain a line between tools that are an aid to thought vs. those that become a substitute for thought.

VII. Category VII - Incentives

Post mortems on invalidated patents can be used to provide incentives without singling out the responsible Examiner for undue criticism.

Presumably, Examiners can lose points when they have negligently allowed claims on grounds that are not supported by the record. By the same token, they should

suffer in their performance review when they have dealt obtusely with meritorious arguments presented on behalf of the applicant, as well as when they have failed to challenge applicants' arguments that are unsupportable or weak. Regular supervisory review in addition to random quality review should be the norm.

Examiners should be encouraged to not merely reprise the text of a prior Office action, but to engage the arguments offered by the applicant, and attack them when they are vague, illogical, technically inaccurate, or unsupported by the law. But too frequently of late, even where the Examiner does address the Applicant's argument, the analysis is disorganized, illogical, and based on assertions of fact that are plainly wrong. What may be needed is a more rigorous review of the Office action than is already being done, in order to yield a product that is well organized, logical, grammatical, grounded in fact, and defensible in law. The incentive may be to redraft actions that fail to meet these standards, with no credit for the additional effort.

It would be useful as well to provide disincentives to unending stream of non-final Office actions citing newly applied art after the applicant has overcome all prior art rejections. Certainly if an amendment implicates a different reference of record, or requires a new search which identifies a new reference that is relevant, the Examiner should by all means consider the new art and apply those rejections that are appropriate. But some Examiners have a proclivity for repetitively dredging up new art whenever a ground of rejection has been overcome, even where there has been no change in the claims and/or the new art is no more than cumulative to what is already of record. This syndrome can lead to years of additional prosecution for startup clients that are then saddled with justifying the delay to venture capital investors who do not understand the process.

VIII - Resources

1. At the PTO End

Given the state of public finances, it may be futile to expect adequate resources to be allocated to the operation of the PTO. Clearly, the level of competence and experience of the Examiner corps needs major improvement.

It has been apparent for decades that Examiners need more time to complete the complex task of understanding the specification, understanding the claims, finding the art, and applying it in a judicious manner. But to propose this in the current economy is probably not realistic.

Many Examiners never read the specification, and many never come to grips with the claims. To meet quotas, unpatentable claims are waived through, while patentable claims are repeatedly rejected without serious analysis by hitting the macro button that replays the text of the previous Office action.

The system needs more qualified Examiners, more experienced Examiners, and in some cases more diligent Examiners. But this is a matter of general public interest that does not seem to generate a constituency adequate to influence the legislative process.

2. At the Applicant's End

My comments objecting to commoditization do not extend to any definitive quantitative opinion on how much professional effort needs to be devoted to any given patent application or amendment, much less what a patent application should cost. Each application must be considered on its own merits. While it is apparent to us that the "one size fits all" concept that has been popularized is deadly mistaken, it does not follow that all, most, or any patent applications should be encyclopedic works.

The extent of the inventor/attorney dialog, the depth and detail of the claim structure, the consequent depth and detail of the specification, and the complexity of presentation should all be guided by nature of the invention, the nature and scope of the prior art, the underlying scientific and engineering principles, the alternatives available to competitors, and - although this is excluded from the PTO's inquiry - the market for the invention and the economic significance thereof. In rare instances the need might be satisfied by a ten page specification with ten claims. In a different fraction of cases, the need may readily be ten times that on both scores. Some inventions may be fully dealt with by a single independent claim, others may require a score of independent claims to define all the useful combinations that are patentable over the art and otherwise made available to the competition by applicant's disclosure of his invention.

Most inventions will fall in the middle, but the middle cannot be narrowly defined by a policy that confines the scope of inquiry, the extent of the claim structure, or the scope of the disclosure to a Procrustean schedule of fixed and invariant limits on the time allocated to the task.

Of course, it actually can and will be so defined if that is where the market settles; but at the price of the poor, or best irregular and indifferent quality that plagues the system today.

What the billing model for all this should be is outside the scope of this paper. The answer to that question depends on what economic incentive is required to draw to the profession persons of superior technical skill, legal acumen, and language skills equal to the task of consistently preparing and prosecuting high quality applications. Given the flux in the profession, and in the economy at large, that question may not be soon answered. If highly qualified attorneys will otherwise be unemployed, the market may well settle at pricing senior professionals well below the equivalent of an hourly rate of \$500, \$400, or even \$250. To say that a patent application should not be treated as a commodity is not to say that it should be expensive. That is a matter for the market to work out.

This is a brief for quality professional work, not for high prices. It relates to the time and talent required for the job rather than the money. But at some point clients who take advantage of a depression in the professional market may run the risk of driving qualified practitioners out of the profession, with the same long term adverse consequences as unrealistically compressing the preparation of complex legal documents such as patent applications and prosecution papers.

John K. Roedel, Jr.
Senniger Powers LLP
100 North Broadway, 17th Floor
St. Louis, MO 63102
314.345.7001
jroedel@senniger.com