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To: patent_quality_comments
Subject: Request for Comments on Enhancement in the Quality of Patents

By way of standing, I am a former USPTO examiner and have prosecuted patents for 45 years, have trained over 100 patent attorneys, and teach a patent preparation course at Michigan State University-College of Law. I believe and can prove that a major portion of the difficulty in the patent system resides in the initial patent preparation. As a duty to the public, it is the responsibility of the USPTO to provide incentives for patent agents to properly prepare patent applications.

As the USPTO recognizes, patent application examination is most efficient and effective when the application meets certain quality standards. Examination would be enhanced if applicants were given incentives to meet certain quality standards in submitting applications. Accordingly, the attached article, previously published in the Journal of Patent and Trademark Society (89 *JPTOS* 809), presents a number of guidelines that the USPTO could consider to provide incentives, e.g. the USPTO could consider an accelerated-type examination of an application which meets any number of guidelines.

Please call upon for any assistance or additional comment you desire. Hal Milton

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***809 PATENT PREPARATION MANDATED BY THE LAW**

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I. Introduction

“In *Graham v. John Deere Co.*, the U. S. Supreme Court set out a framework for applying the statutory language of *35 U.S.C. § 103*.” [FN1] In accordance with *Graham*, the fact finder should determine “the scope and content of the prior art,” ascertain the “differences between the prior art and the claims at issue, ...” [FN2] In accordance *35 U.S.C. § 112*, a patent application “shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.” [FN3]

Notwithstanding these very clear mandates, many patent applications are filed without any attention to the prior art and/or without any identification whatsoever of the subject matter of the invention. In order to increase quality and examination efficiency, the USPTO has offered the incentive of accelerated examination to encourage compliance with these mandates.

This article sets forth a system that implements the mandates of *Graham* and *§ 112* while incorporating an attribute of the law of many foreign jurisdictions. A world-wide system is purposed in the practicality of preparing a patent application that will facilitate prosecution in the patent offices around the world to substantially enhance quality of protection, *810 efficiency, and expense with a high degree of enforcement success. It is also suggested that the USPTO establish a separate docket to expedite the examination of applications meeting these worldwide mandates, which include most of the qualifications for accelerated examination.

II. Legal Mandates

A. *The Scope and Content of the Prior Art*

Even though *Graham* requires the fact finder to determine “the scope and content of the prior art,” [FN4] many patent applications are filed without any mention of the prior art, and more importantly, without any searching for the most pertinent prior art before preparing the application. Some patent applications are filed with the objective of letting the USPTO find the best prior art and then respond with lengthy amendments in search of the inventive subject matter.

The novelty search is the foundation for the entire patent application; after all, a patent application is seeking ownership of that which the inventor contributes as new, *i.e.*, novel. A perfect patent application can only be written around or right up to the closest things that have gone before, *i.e.*, a perfect patent application requires a

perfect analysis of the most pertinent prior art. The purpose for the claims in a patent application is to define the metes and bounds of the invention, *i.e.*, a line between that which is new, and that which is old and well known. Unless the metes and bounds or line of novelty established by the prior art is identified, a patent application cannot be drafted defining the invention in the broadest terms allowed by or not known in the prior art. In other words, the prior art establishes the metes and bounds of the claims, particularly the broadest claim 1, and without that prior art, the drafting of the claims is guesswork and not skill. Even if the inventor is an expert in the art to which the invention pertains, the inventor does not know the law and does not appreciate how the USPTO will apply prior art to the claims defining the invention. It is the duty of the patent preparer to know and anticipate the prior art against which the USPTO will judge patentability. It is analogous to a surgeon operating based upon a through diagnosis.

The examiner in the patent office usually rejects various elements of a claim as old and well known in the prior art but allows the claim because of a novel limitation. In anticipation of these steps, why not uncover and isolate the novel limitation with a search of the prior art as the claims are drafted while having access to the inventor to verify that which is NEW?

B. Differences Between the Prior Art and the Subject Matter to be Patented

In *KSR*, the Court acknowledged that [35 U.S.C. § 103](#) is a codification of the “logic of ... *Hotchkiss v. Greenwood*.” [FN5] An invention is obvious, and therefore not patentable, “if the differences between the subject matter sought to be patented *811 and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” [FN6] As the law of patentability developed, a threshold bar is established that, in situations where all of the elements of the claimed invention are found in the prior art, a patent will issue only to those combinations that produce a new and useful result. Even then, if cogent reasoning, based in no part upon hindsight, demonstrates predictability of the new result, a patent will not issue. Therefore, the mere selection of old elements with no change in their respective functions cannot be said to yield a result which is both new and unexpected, *i.e.*, the results were predictable.

In summary, the tests for obviousness which can be gleaned from *KSR* are:

1. a teaching, suggestion or motivation (TSM) in the prior art can render an invention obvious,
2. the mere selection of elements from various prior art references and combining them together *with no new function or unpredictable result* is an obvious use of common sense by one skilled in the art, and, therefore, not patentable, and
3. a combination that includes something new or produces a new function or unpredictable result is presumed patentable absent cogent reasoning that is unequivocally independent of hindsight.

In accordance with *KSR*, there must be something NEW, either in element or step or new or unpredictable results, in order to be patentable. Otherwise, an inventor must have very cogent reasoning to overcome a rejection based upon a combination of old elements by the USPTO. In a nutshell, the U.S. Supreme Court has said that patents should be granted and enforced only when there is something NEW and that patents merely covering re-arrangements of old things are not enforceable.

The mandates of *KSR* and *Graham* coupled with [35 U.S.C. § 112](#) require the NEW to be particularly pointed out and distinctly claimed.

C. Particularly Pointing Out and Distinctly Claiming

Isolating the NEW “differences” over the prior art found in the search serves as a fundamental link in the road to “particularly pointing out and distinctly claiming” the invention as required by 35 U.S.C. § 112. [FN7] Without a search, the drafter of a patent application simply does not know where or how to separate the old from the NEW in claiming the invention. The filing of a patent application in which the claims do not separate the NEW from the old invention is particularly egregious when that application is filed in various foreign countries, particularly where the application must be translated into another language. The expenses can be very high to redraft the claims to avoid pertinent prior art cited by the various patent offices of *812 the world during prosecution in pursuit of separating the NEW from the old. More important than this expense is the probability of missing the correct definition of the NEW in pursuing the invention during prosecution instead of establishing the NEW with concurrence of the inventor during the initial drafting of the claims. The probability of missing the commercially correct definition of the NEW in the invention is increased because the prosecution of these patent applications is frequently undertaken without access to the inventor and by an attorney different from the attorney who originally prepared the application. Additionally, the maneuverability in redrafting the claims in pursuit of the invention is limited by the scope of the original description under the law preventing the addition of new subject matter. [FN8] The prosecution of a patent application prepared without a search to identify that which is NEW is much more expensive and fraught with potential errors that could diminish the effectiveness of the resulting patent.

It is most important to keep in mind that the application process with a USPTO is NOT an adversarial process. The USPTO wishes to grant patents, but valid patents. The inventor, through the patent attorney's preparation of the application, is applying for patent protection and the USPTO is there to approve that application. Clearly, the burden is upon the applicant to make that application as precise as possible. It is not the duty of the USPTO to figure out where the invention resides by developing claim language. It is incumbent upon the applicant to make the examiner's approval process as easy as possible.

D. Incentives by the USPTO to Raise Quality

In order to increase efficiency of examination and to raise the quality of applications, the USPTO is encouraging practitioners toward these mandates. The USPTO has established an accelerated examination procedure under which the examination of a patent application may be accelerated and taken out of turn for examination if the applicant files a grantable petition to make special under the accelerated examination program. The requirements for the application to qualify for accelerated examination are provided to assist applicants and their attorneys in preparing the patent application such that the application will likely be accepted as filed, lead to the desired patentability decision within 12 month or shorter time frame and produce the high quality patent protection desired by the applicant.

In order to qualify for accelerated examination, *inter alia*, the application papers must include: [FN9]

1. A statement that a search was conducted.
2. No more than 3 independent claims and no more than 20 claims total.
3. No multiple dependent claims.
4. A single invention (or agreement to examination of one invention).
5. A detailed explanation of the patentable novelty in each claim.
- *813 6. A detailed explanation of where the old limitations are found in the references.

7. An electronically filed application.

These requirements for accelerated examination are nothing more than the mandates of *Graham* to determine “the scope and content of the prior art,” and ascertain the “differences between the prior art and the claims at issue, ...” [FN10] coupled with 35 U.S.C. § 112 requiring claims “particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.” [FN11] It could be argued that *Graham* coupled with 35 U.S.C. § 112 requires every patent application to meet these requirements for accelerated examination. However, it is suggested that these mandates could be finessed and tweaked a little farther to facilitate prosecution in the USPTO as well as patent offices around the world to substantially raise quality and reduce prosecution expenses.

III. Implementing the Mandates

A. Searching the Prior Art

Judge Rich was a primary architect in drafting § 103 in 1952. His opinion in *In Re Winslow*, stated that “the proper way to apply the 103 obviousness test ... is to first picture the inventor as working in his shop with the prior art references-which he is presumed to know- hanging on the walls around him.” [FN12] In other words, it is a mere use of common sense by one skilled in the art to select and combine known elements displayed on the wall with no change in function. The elements of the combination produced the predicted results for which they were selected. In *KSR*, the Court states that “modern technology counsels against” non-obviousness just because of a lack of “discussion” in the prior art literature. [FN13] Modern technology allows a man skilled in the art to search the internet for elements by name or names and by functional terms. Such searching includes technical data bases in addition to searching prior art patents. Because of modern technology, Judge Rich's wall now includes *all* of the information available by searching the internet. It is a mere matter of common sense for one skilled in the art to search the internet and select and combine known elements with no new function, *i.e.*, to produce predictable results.

Because the internet is available or should be available to every patent attorney *in the world* there is really no excuse for a patent attorney not searching the various data bases for prior art as a routine step in the preparation of a patent application. If the search reveals that all of the elements or steps are individually shown in the prior art to perform the same expected function, the inventor should be queried for something new, *i.e.*, new results. In the perfect world, the examiners around the world will find no better prior art than that analyzed by the inventor and the patent attorney. It is, of course, up to the patent attorney to draft the *814 claims to particularly point out and distinctly claim the new subject matter.

B. “Characterized by” to Particularly Point Out and Distinctly Claim

Much of the world requires the use of a “characterized by” clause to divide a claim into old subject matter before the clause and the NEW subject matter after the clause. Germany has for many years provided for dividing a claim into a generic or prior art portion and a characterizing portion setting forth the subject matter for which patent protection is sought. The European Patent Convention provides that a claim shall contain a characterizing portion reciting the NEW subject matter and preceded by old subject matter necessary to support the new subject matter. [FN14] The emerging patent law of China requires the use of a characterizing portion in a claim to isolate the NEW subject matter. [FN15] A significant portion of the patent offices around the world

have recognized the advantages of using a characterized by clause. However, a significant portion of the patent preparers in the US do not appreciate how the use of the characterized by clause can significantly improve quality.

The characterized by clause can be used as a tool in preparation stage in mentally driving to the broadest recitation of the invention. By comparing the disclosure from the inventor to the prior art, the features of the disclosure not found in the prior art are identified as the NEW subject matter. An analysis of the new subject matter establishes a priority of importance in the discrete elements or functions of the new subject matter. The most important element or function is recited after the characterized by clause of the broadest claim with only that necessary to support that element or function preceding the characterized by clause.

An effective step in the drafting of the claims is to first draft a picture claim that accounts for every line in the drawings and every element or step mentioned in the disclosure from the inventor. In so doing, the elements are given names without repeating names for different elements and by building the preferred embodiment in a story fashion, the invention is thoroughly understood and no nuisances are overlooked. An editing of the picture claim will separate the old elements from the NEW elements with the characterized by clause.

The picture claim is pared down in the process of prioritizing the NEW elements to finally reach the content of the characterized by clause of the broadest claim. The characterized by clause should contain only one limitation and the old preceding the characterized by clause should include only that necessary to support that one new limitation. The dependent claims sequentially add new limitations from the picture claim in order of the priority, adding old subject matter as necessary for support.

C. One Broad Claim per Application

In addition to the characterized by clause, many patent jurisdictions, including the *815 Accelerated Examination Procedure of the USPTO, require that an application include one independent claim broader than all others, the exception being different classes of invention, *e.g.*, method and apparatus, in one application, but each class of claims must have one claim broader than the other claims in that class. In other words, one class of invention per application. In most instances this results in one independent broad claim per application.

If the disclosure from the inventor includes more than one inventive element justifying an independent characterized by clause, a second patent application should be prepared to satisfy the one invention per application requirement. If the application initially has two independently broad claims (*i.e.*, two inventions) and the application is filed in countries foreign to the United States, one of the inventions may be lost and/or the prosecution expenses will soar.

Unfortunately, many patent applications are filed with an array of “broad” independent claims “shot-gunning” the disclosure. This is particularly true when “the scope and content of the prior art” is not ascertained with a search. The claims do not focus the examiner and it is often difficult for the examiner to determine what the applicant considers to be new in a claim. Consequently, patents have been granted with a plurality of independent claims of different scope but with none ultimately covering the commercially important NEW subject matter. Poor presentation in a patent application can lead to less than ideal examination.

IV. The Graham-112 World Application

It is the duty of applicants for patents to recite what they want; it is not the duty of a patent office examiner to sort through the claims in an effort to isolate the NEW from the old. The characterized by clause meets the requirements of *Graham* and [Section 112](#) as well as satisfying requirements of various patent offices around the world. Meeting world-wide standards will be accomplished in preparing a patent application by:

1. conducting a prior art search.
2. drafting a picture claim with a characterized by clause separating the old from the NEW.
3. drafting one broad claim with a characterized by clause separating the old from the NEW.
4. copying a picture claim to serve as a “guide claim” with the NEW subject matter *italicized* and the old subject matter referenced in the prior art.
5. Referencing the claim limitations to the disclosure in the guide claim

A. The Prior Art Search

A search submitted in support of a petition for accelerated examination at the USPTO will be considered sufficient if the search includes: [\[FN16\]](#)

1. A classified search of the US patents and published patent applications in the Class and subclass where the claimed invention is most likely to be classified in the current United *816 States Patent Classification system (USPC)
2. A text search of the US patents and published patent applications that covers the subject matter of the independent claims using terms recognized in the art given their broadest reasonable interpretation. The search should consider individual features by themselves and combinations of features. The search should cover the broadest scope encompassed by the claims as well as claims of narrow and intermediate breadth
3. A text search of foreign patent documents that includes the sources required under the PCT minimum documentation requirements, to the extent available. The PCT minimum documentation requirements can be found at http://www.wipo.int/standards/en/part_04.html. ...

It is in applicant's best interest to have the patent application drafted around the most pertinent prior art to avoid expensive amendments and the potential of not claiming the essence of the invention. The internet renders the searching process much more thorough and, in reality, allows no excuse for not conducting a pre-preparation search.

B. The Picture Claim and the Guide Claim

The guidelines for accelerated examination at the USPTO require an Accelerated Examination Support Document (AESD): [\[FN17\]](#)

(B) For each reference cited, the accelerated examination support document must include an identification of all the limitations in the claims that are disclosed by the reference specifying ... where in each of the cited references the particular claim limitations are found. ...

(C) The accelerated examination support document must include a detailed explanation of how each of the claims are patentable over the references cited with the particularity required by [37 CFR 1.111\(b\)](#) and [\(c\)](#). Applicants should ... include the identification of specific claim limitations that support

their position, where appropriate. ...

As alluded to above, a picture claim recites every element or step in the preferred embodiment of the invention. The picture claim, creates a word picture of the preferred embodiment. The picture claim should tell a story in claim terminology and account for every line in the drawings. The picture claim verifies a through understanding of every last detail of the preferred embodiment and forces the use of different terminology for different elements. The recitations in the picture claim should be rearranged to separate the old elements from the new or novel elements by a “characterized by” clause.

The first step in satisfying the guideline in (B) above is accomplished by the recitation in the picture claim of all of the old elements before the characterized by clause. All that need be done is to specifically reference where each old limitation is found in a prior art reference.

The guideline in (C) above merely requires the type of arguments set forth in a response to a rejection pointing out the *817 claim limitations and how they distinguish over the prior art. All of the limitations following the characterized by clause are NEW thereby satisfying the requirement to point out the new claimed subject matter. Because these claim limitations are NEW and not found in the prior art, it is inherent that the argument for patentability resides in the fact that the limitations are NEW. Thus, the third test resulting from *KSR* is applicable, to wit: a combination that includes something new or produces a new function or unpredictable result is presumed patentable absent cogent reasoning that is unequivocally independent of hindsight.

Since the picture claim includes every element of the preferred embodiment and separates the NEW from the old by a characterized by clause, a copy of the picture claim with the NEW subject matter *italicized* and a citation to a prior art reference by column and line adjacent each old subject matter limitation will be prepared and labeled a guide claim.

C. A Single Invention

To limit the application to one invention is to include one independent claim broader than all other claims, *i.e.*, all other claims will include all of the limitations of the broadest claim, which should be claim 1.

The mental process in drafting the broad claim requires the drafter to eliminate and/or combine elements of the picture claim so that the broad claim will recite only the most important novel element after the “characterized by” clause which is preceded only by the prior art elements that are necessary to support that novel element. Once the broad claim is finished it may be necessary to edit the picture claim to conform, reconcile or add the language used in the broad claim. In most applications, claim 1 will recite only one point of novelty after the characterized by clause.

Once the broad claim is reconciled with the picture claim, the drafter re-introduces the remaining limitations of the picture claim in various dependent claims by prioritizing the limitations. The first echelon of dependent claims should prioritize the respective novel elements, adding old elements only when necessary to support the newly recited novel element. After the new elements are exhausted in dependent claims, additional dependent claims may be included to add old elements to the combination as may be prudent in each respective application.

At the end of editing, the picture claim will contain every phrase used in each of the broad and dependent claims. Accordingly, the guide claim (copy of the picture claim), with the NEW subject matter *italicized* and a

citation to a prior art reference by column and line adjacent each old subject matter limitation, should satisfy the AESD guidelines in (B) and (C) above without adding corresponding citations to the remaining claims. If not, it is easy to submit a copy of all the claims by cutting and pasting the citations to references from the picture claim to the same phrases in the broad and dependent claims.

D. Referencing the Disclosure to Claim Limitations in the Guide Claim

The AESD guidelines also include: [FN18]

(E) The accelerated examination support document must include a *818 showing of where each limitation of the claims finds support under the first paragraph of 35 U.S.C. 112 in the written description of the specification Applicants should specify where in the specification each limitation of the claim finds support.

Since the picture claim includes every recitation in all of the other claims, the picture claim may be copied into the description and edited into an easy flowing and grammatically correct description using reference numerals to refer to the drawings. It is important that the same terminology used in the claims be used in the description. A reference to paragraph number and line in the disclosure may be added to each limitation in the guide claim for tying claim limitations to support in the disclosure to satisfy this guideline.

V. The Graham-112 Docket

It is respectfully submitted that the USPTO establish a Graham-112 docket whereby applications meeting the above mandates are examined ahead of other applications on an examiner's docket, *i.e.*, the examiner maintains a differential between Graham-112 docket applications and all others. In order to qualify for the Graham-112 docket, an application must be electronically filed containing a claim 1 broader than all other of the maximum 20 claims including one picture claim containing all of the limitations of all the other claims and an Accelerated Examination Support Document (AESD) containing:

1. A statement describing the search.
2. An identification of the prior art patents (documents) around which the claims were drafted, preferably in the Prior Art sub-section of the BACKGROUND section.
3. A statement that the remaining prior art references in the IDS are redundant and/or less pertinent.
4. A characterized by clause separating the old from the NEW in claim 1 and in the picture claim.
5. A guide claim (copy of the picture claim) with all NEW limitations following the characterized by clause in *italics* and citations to the prior art of 2) above by column and line adjacent each old limitation and referencing each old and New limitation to the disclosure by paragraph and line.

VI. Summary

The U. S. Supreme Court in *Graham v. John Deere Co.*, requires a search for “the ... content of the prior art” to ascertain that which is NEW. [FN19] In *KSR v. Teleflex*, the U. S. Supreme Court requires the claims to recite something NEW and not merely a re-arrangement of old elements. [FN20] And 35 U.S.C. § 112 requires that which is NEW to be particularly pointed out. [FN21] Much of the rest of the world utilizes a “characterized by” clause to particularly point out by separating the old from the NEW.

All that need be done to raise the quality of patents worldwide is for patent preparers to implement these mandates and tell the patent office how they did it!

[FN1]. Hal Milton currently manages the Dickinson-Wright Intellectual Property Academy, acting as a mentor to student clerks and young attorneys, training them in the art of patent application preparation. He also regularly teaches a course in patent application preparation at Michigan State University College of Law. After serving as an examiner in the USPTO while attending law school, Mr. Milton has been a patent attorney in private practice for over 40 years during which he has continually prosecuted patent applications around the world. In addition, *Mr. Milton drafted claim 4 of U.S. Patent No. 6,237,565, the patent claim at issue in KSR v. Teleflex*. All information found in this article is the opinion of Mr. Milton and does not necessarily reflect the opinions of Dickinson-Wright PLLC or its staff. Dickinson-Wright PLLC disclaims any responsibility for any reliance upon this article.

[FN1]. *KSR Int'l v. Teleflex, Inc.*, 82 U.S.P.Q.2d 1385, 1391 (U.S. 2007) (citing *Graham v. John Deere Co. of Kansas City*, 148 U.S.P.Q. 459, 383 U.S. 1 (1966)).

[FN2]. *Graham*, 148 U.S.P.Q. at 467, 383 U.S. at 17.

[FN3]. 35 U.S.C. § 112 (2005).

[FN4]. *Graham*, 148 U.S.P.Q. at 467, 383 U.S. at 17.

[FN5]. *KSR* at 1391 (citing *Hotchkiss v. Greenwood*, 52 U.S. 248, 11 How. 248 (1850)).

[FN6]. 35 USC § 103.

[FN7]. 35 U.S.C. § 112 (2005).

[FN8]. *See* 35 U.S.C. § 132 (2005).

[FN9]. *See* USPTO, http://www.uspto.gov/web/patents/accelerated/ae_guidelines_120607.doc (last visited Aug. 14, 2007).

[FN10]. *Graham*, 148 U.S.P.Q. at 467, 383 U.S. at 17.

[FN11]. 35 U.S.C. § 112 (2005).

[FN12]. *In re Winslow*, 365 F.2d 1017, 1020 (C.C.P.A. 1966).

[FN13]. *KSR*, 82 U.S.P.Q.2d at 1389.

[FN14]. *See* EPC Rule 29(1)(a)-(b) (2006).

[FN15]. *See* Sipo, http://www.sipo.gov.cn/sipo_English/laws/lawsregulations/200203/t20020327_33871.htm (last visited Aug. 14, 2007).

[FN16]. USPTO, http://www.uspto.gov/web/patents/accelerated/ae_guidelines_120607.doc (last visited Aug. 14, 2007).

[FN17]. *Id.*

[FN18]. USPTO, http://www.uspto.gov/web/patents/accelerated/ae_guidelines_120607.doc (last visited Aug. 14, 2007).

[FN19]. *Graham*, 148 U.S.P.Q. at 467, 383 U.S. at 17.

[FN20]. *See KSR*, 82 U.S.P.Q.2d 1385.

[FN21]. 35 U.S.C. § 112 (2005).

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