

Strafford

presents

Obviousness Standard for Patents Post-KSR

Strategies to Withstand USPTO Obviousness Rejections and Attacks on Patent Validity

A Live 90-Minute Teleconference/Webinar with Interactive Q&A

Today's panel features:

Kevin J. Meek, Partner, **Baker Botts**, Austin, Texas
Ronald E. Cahill, Partner, **Nutter McClennen & Fish**, Boston
Karen Canaan, Attorney, **CanaanLaw**, Menlo Park, Calif.

Wednesday, April 14, 2010

The conference begins at:

1 pm Eastern

12 pm Central

11 am Mountain

10 am Pacific

You can access the audio portion of the conference on the telephone or by using your computer's speakers.
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The History of Obviousness and the "new" Standard Announced in KSR

Kevin Meek
Strafford *KSR* Webinar
April, 14, 2010

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Obviousness



Obviousness Standard

- **35 U.S.C. 103 Conditions for patentability; non-obvious subject matter.**

(a) A patent may not be obtained . . . , *if the differences between the subject matter sought to be patented 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. . . .*

Obviousness Analysis Pre-KSR

Traditional Analytical Framework

- *Graham v. John Deere*, 383 U.S. 1 (1966)
 - Determine the scope and content of the prior art;
 - Ascertain the differences between the claimed invention and the prior art;
 - Resolve the level of ordinary skill in the pertinent art;
 - Determine the obviousness or nonobviousness of the subject matter; and
 - Evaluate secondary/objective considerations, e.g., commercial success, long felt but unsolved needs, failure of others, that militate against a determination of obviousness.

Obviousness Analysis Pre-KSR

- **Pre-KSR Federal Circuit Jurisprudence**
 - “Teaching-Suggestion-Motivation” (“TSM”) test:
 - The prior art must provide some teaching or suggestion that would motivate one of skill in the art to combine known elements to achieve the claimed invention
 - Source of TSM
 - expressly from the references themselves.
 - *ACS Hosp. Systems, Inc. v. Montefiore Hosp.*, 732 F. 2d 1572, 1577 (Fed. Cir. 1984)
 - knowledge of those skilled in the art
 - *Al-Site Corp. v. VSI Int'l., Inc.*, 174 F. 3d 1308, 1323-24 (Fed. Cir. 1999)
 - the nature of a problem to be solved
 - *In re Rouffet*, 149 F. 3d 1350, 1355 (Fed. Cir. 1998)

Obviousness Analysis Announced in *KSR*

- ***KSR v. Teleflex*, 127 S. Ct. 1727 (2007)**
 - Marked A Turning Point In the Handling Of Obviousness Analysis Under 35 U.S.C. § 103.
 - The Supreme Court Rejected The Prevailing "Teaching/Suggestion/Motivation" ("TSM") Test As Overly-Rigid.
 - The Supreme Court Introduced A Flexible Standard In An Effort To Introduce "Common Sense" Into The Analysis.

Obviousness Analysis Announced in *KSR*

- ***KSR* Introduced a Flexible Standard**
 - *KSR* reaffirmed the traditional obviousness analysis established in *Graham v. John Deere*
 - The Federal Circuit erred by applying the TSM test in an overly rigid and formalistic way
 - “[O]ur cases have set forth an expansive and flexible approach inconsistent with the way the Court of Appeals applied its TSM test here.”

Obviousness Analysis Announced in *KSR*

- **The Federal Circuit's Errors:**

- 1) Only analogous art as a source of TSM
- 2) A person of ordinary skill in the art attempting to solve a problem will be led only to prior art designed to solve the same problem
- 3) "Obvious to try" is never a sufficient basis for supporting a finding of obviousness

Non-Analogous Art

- **Non-Analogous Art Pre-*KSR***

- Rigid TSM analysis
 - Same Problem/Same Field



- **Non-Analogous Art in *KSR***

- Flexible Standard - Any known need or problem can be used.
 - Particular motivation and purpose does not control
 - Similar Problem/Similar Field



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"Ordinary Creativity" and Common Sense

- “A person of ordinary skill is also a person of *ordinary creativity*, not an automaton. . . . If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and *common sense*.”

KSR, 550 U.S. at 421



"Obvious to Try"

- **"Obvious to Try" Pre-KSR**

- "'Obvious to Try' has long been held not to constitute obviousness." (*In re Deuel*, 51 F.3d 1552, 1559 (Fed. Cir. 1995)).

- **"Obvious to Try" in KSR**

- "*Where there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp...In that instance the fact that a combination was obvious to try might show that it was obvious under §103.*" (*KSR*, 127 S. Ct. at 1742) (emphasis supplied).



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Trends in Obviousness in the PTO and Courts Since KSR

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April 14, 2010

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Post-KSR Obviousness in the PTO

Trends

- Applicants and Practitioners frustrated with examination quality
 - Particularly with poorly formulated obviousness rejections that are made final
 - View that the BPAI rubber stamps rejections to improve decision statistics
 - Obviousness rejections where all of the claim elements are present in one reference or another affirmed regardless of rationale for combining
- Tide turning?



Post-KSR Obviousness in the PTO

Trends

- New emphasis by SPEs to reach out to Applicants
- More allowances
- Director Kappos drives trend with email to Examiners
 - “On the subject of quality, there has been speculation in the IP community that examiners are being encouraged to reject applications because a lower allowance rate equals higher quality. Let's be clear: patent quality does not equal rejection.”
 - “One key is to expeditiously identify and resolve issues of patentability—that is getting efficiently to the issues that matter to patentability in each case, and working with applicants to find the patentable subject matter and get it clearly expressed in claims that can be allowed.”



Post-KSR Obviousness in the PTO

The Examination Guidelines

- Director Kappos was questioned at AIPLA Annual Meeting about the lack of positive examples in the KSR Examination Guidelines.
 - More balanced Guidelines may be under consideration
 - Compare to 101 Guidelines
- Obviousness rejections do not apply Guidelines
- Applicants use the Guidelines to attack rejections



Post-KSR Obviousness in the PTO

Statistics at the Board

- Extraordinarily Few Decisions Published as Precedential
- The PTO publishes some statistics:
 - These numbers come from the BPAI for October 1, 2008 to August 31, 2009:

Technology Center	Affirmed	Affirmed in part	Reversed
1600 Biotechnology and Organic Chemistry	57%	14%	28%
1700 Chemical and Materials Engineering	66%	10%	23%
2100 Computer Architecture, Software, and Information Security	62%	13%	24%
2600 Communications	61%	15%	24%
2800 Semiconductors, Electrical and Optical Systems and Components	62%	12%	27%
3600 Transportation, Construction, Electronic Commerce, Agriculture	46%	22%	31%
3700 Mechanical Engineering, Manufacturing, Products	49%	19%	32%
3900 Central Reexamination Unit	51%	20%	29%



Post-KSR Obviousness in the PTO

Statistics at the Board

- University of Missouri School of Law Legal Studies Research Paper Series (and Patently-O) published statistical study of approximately 6,000 BPAI decisions from January 2008 to May 2009
- What do they show for obviousness:
 - First – on an issue-by-issue basis, BPAI affirms 61% overall
 - 87-90% of appeals include at least one obviousness issue
 - 54% of appeals focused only on obviousness
 - Obviousness more likely to be affirmed than other rejections:

Issue Holding	Obviousness Rejection	Other Grounds of Rejection
Affirmed	65%	52%
Reversed	35%	48%



Post-KSR Obviousness in the PTO

Precedential Board Decisions Since KSR (Affirming)

- Ex Parte Jella (2008) – overhead garage doors, obviousness rejection affirmed
- Ex Parte Yamaguchi (2008) – method for forming bumps on a semiconductor device for use in a flip-chip technique, obviousness rejection affirmed
- Ex Parte Fu (2008) – electrostatographic imaging member having a charge transport layer containing a specified surfactant, obviousness rejection affirmed
- Ex Parte Nehls (2008) – a computer-based system for comparing nucleic acid sequences, obviousness rejection affirmed
- Ex Parte Catan (2008) -- a consumer electronics device using bioauthentication to authorize sub-users of an authorized credit account, obviousness rejection affirmed
- Ex Parte Kubin (2007) – biotech invention involving “obvious to try,” obviousness rejection affirmed
- Ex Parte Smith (2007) – a pocket insert for a bound book, obviousness rejection affirmed



Post-KSR Obviousness in the PTO

Precedential Board Decisions Since KSR (Reversing)

- Ex Parte Whalen II (2008)
 - Claim 1 recited an embolizing composition that differed from the prior art, it is by virtue of the limitation that “the biocompatible polymer has a molecular weight sufficient to impart to the composition a viscosity of at least about 150 cSt at 40° C.”
 - No rationale for optimizing viscosity as it was not recognized as a result effective parameter, obviousness rejection reversed
- Ex Parte Frye (2010)
 - Examiner’s 102 and 103 rejections based on finding that prior art shoe had two elements that met “substantially halfway” – Board found Examiner’s interpretation to be unreasonably broad and reversed.
 - Board refused to consider Examiner’s late argument that it would be obvious to place the meeting point “substantially halfway”

An Interesting Non-Precedential Case

- Ex Parte Rinkevich (2007 09/731,623) – Examiner’s rationale for adding second reference was already fully addressed in first reference, Examiner therefore used hindsight to create rejection roadmap from invention, obviousness rejection reversed



Post-KSR Obviousness in Federal Courts

Pre-KSR Federal Circuit Statistics

- Petherbridge and Wagner 2006 empirical assessment*:
 - Fed. Cir. Found patents obvious 58% of the time, and affirmed obviousness findings 65% of the time
 - Procedural posture has strong effect on results:
 - Dispositions as a matter of law affirmed at lower rates
 - Dispositions after trial affirmed at higher rates
- * Lee Petherbridge & Polk Wagner, The Federal Circuit and Patentability: An Empirical Assessment of the Law of Obviousness, 85 Tex. L. Rev. 2051 (2006).



Post-KSR Obviousness in Federal Courts

Post-KSR Federal Circuit Statistics

- Mojibi empirical assessment*:
 - Four District Courts (N.D.Cal., C.D.Cal., N.D.Ill., and S.D.N.Y.) and the Federal Circuit
 - Finds significant post KSR Changes

District Court Obviousness Rulings	Before Cert.	After KSR
Obvious	6.3%	40.8%
Non-Obvious	50.0%	22.4%

* Ali Mojibi, An Empirical Study of the Effect of KSR v. Teleflex on the Federal Circuit's Patent Validity Jurisprudence, Electronic copy available at: <http://ssrn.com/abstract=1518607>



Post-KSR Obviousness in Federal Courts

Post-KSR Federal Circuit Statistics

- Mojibi empirical assessment*:
 - Fed. Cir. Review of D.Ct. Obviousness:

Lower Court Findings of Obviousness	Before Cert.	Between Cert. And KSR	After KSR
Obviousness Affirmed	66.7%	100.0%	84.6%
Vacated and Remanded	11.1%	0.0%	0.0%
Obviousness Reversed	22.2%	0.0%	15.4%

Lower Court Findings of Non-Obviousness	Before Cert.	Between Cert. And KSR	After KSR
Non-Obviousness Affirmed	56.3%	54.5%	56.7%
Vacated and Remanded	12.5%	36.4%	33.3%
Non-Obviousness Reversed	31.3%	9.1%	10.0%



Post-KSR Obviousness in Federal Courts

How Do the Trends Play Out on Preliminary Injunctions

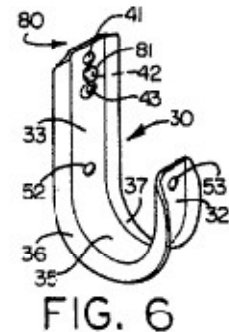
- Interplay between “substantial question” and KSR makes an already difficult situation worse
 - *Genentech* (1997) establishes primacy of “substantial question”
 - J. Newman rebels in *Abbot v. Sandoz*, but no *en banc* review
 - J. Newman writes for majority in *Titan Tire*, “likelihood of success” now the rule (if Newman is on your panel)



Post-KSR Obviousness in Federal Courts

Erico Int'l Corp. v. Vutec Corp.

- D. Ct. Bravely takes on the standard
 - Claims a method of hanging wires using J-hooks having “curved saddle having smooth down-turned obtuse angle lateral edges”
 - Defendant argued that prior art methods, combined with prior art hooks, raised substantial question of obviousness
 - D.Ct. engaged in thorough analysis of “substantial question,” and concluded patentee was likely to succeed based on (1) similar arguments and art being presented in two reexams, and (2) evidence on secondary considerations
- Fed. Cir. Ignores legal standard and applies *KSR*
 - Defendant’s “invalidity challenge based on obviousness cast enough doubt”

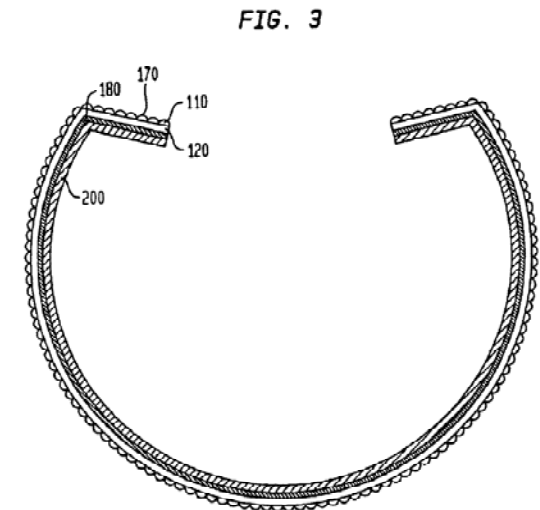




Post-KSR Obviousness in Federal Courts

PrintGuard Inc. v. Anti-Marking Systems

- This time, the D.Ct. tries to follow the Fed. Cir.
 - Claims a printing press transfer cylinder with an anti-marking sheet having a microcellular foam backing
 - Ct. analyzes law and concludes that invalidity challenge can raise a “substantial question” even if it is not likely to succeed
 - “the Court concludes that defendant has raised a ‘substantial question’ as to the validity of the patent due to obviousness. Particularly given the relative simplicity of the claimed inventions, there is a substantial issue as to whether it would have been obvious for a person of ordinary skill in the art to have applied a foam-backed jacket to a transfer cylinder of uniform radius.”





Post-KSR Obviousness in Federal Courts

How Do the Trends Play Out on Summary Judgment/JMOL

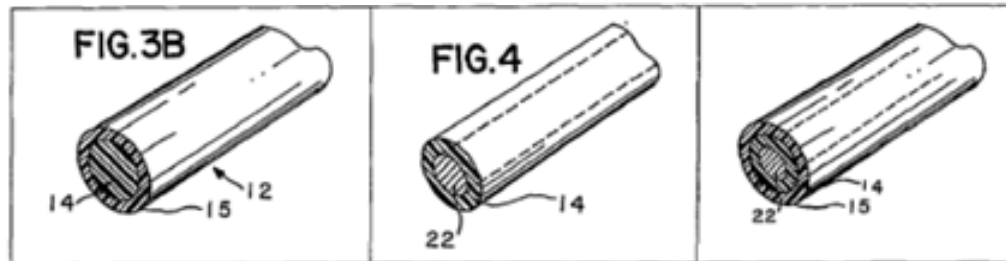
- “Since KSR, the Federal Circuit has had several opportunities to consider this revised obviousness inquiry. See, e.g., *Boston Scientific Scimed, Inc. v. Cordis Corp.* 554 F.3d 982, 2009 U.S. App. LEXIS 588, 2009 WL 89246 (Fed. Cir. Jan. 15, 2009); *Sundance, Inc. v. DeMonte Fabricating Ltd.*, 550 F.3d 1356, 2008 WL 5351734 (Fed. Cir.2008); *Asyst Techs., Inc. v. Emtrak, Inc.*, 544 F.3d 1310 (Fed. Cir. 2008). These cases further define the contours of the post-KSR obviousness inquiry, and confirm the KSR Court's exhortation that, ‘where the content of the prior art, the scope of the patent claim, and the level of ordinary skill in the art are not in material dispute, and the obviousness of the claim is apparent’ in light of an objective review of these factors, summary judgment is appropriate.” *Medtronic Vascular Inc. v. Advanced Cardiovascular Systems, Inc.*, 2009 U.S. Dist. LEXIS 8948 (N.D.CA. 2009).



Post-KSR Obviousness in Federal Courts

Boston Scientific Scimed, Inc. v Cordis Corp.

- Federal Circuit reverses as a matter of law, 554 F.3d 982 (Fed. Cir. 2009)
 - Claims a metallic stent with a biologically active material for timed release from and undercoat, and a topcoat that provides long term non-thrombogenicity
 - Jury found the claims non-obvious, defendant's JMOL denied
 - Fed. Cir. (with no deference) reverses as a matter of law, embodiments can be combined to render the claim obvious





Post-KSR Obviousness in Federal Courts

Arrow Int'l., Inc. v. Spire Biomedical, Inc.

- An Active Judge Builds Appeal Proof 103 Opinion
 - Claims retrograde tunneling of a double-Y shaped multi-lumen dialysis catheter.
 - Ct. finds retrograde tunneling in public use “Cannon” catheter product
 - Pourchez patent shows advantages of double Y-shaped catheter
 - The Court concludes that the claims are obvious as “a combination which only unites old elements with no change in their respective functions.’ *KSR*.”

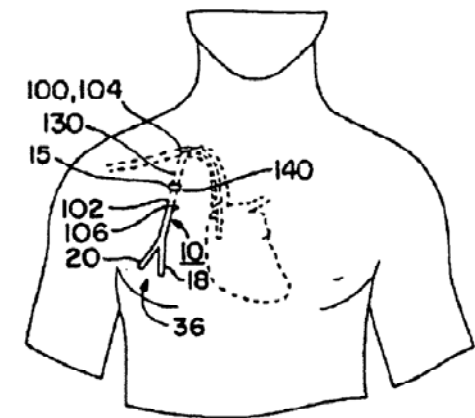


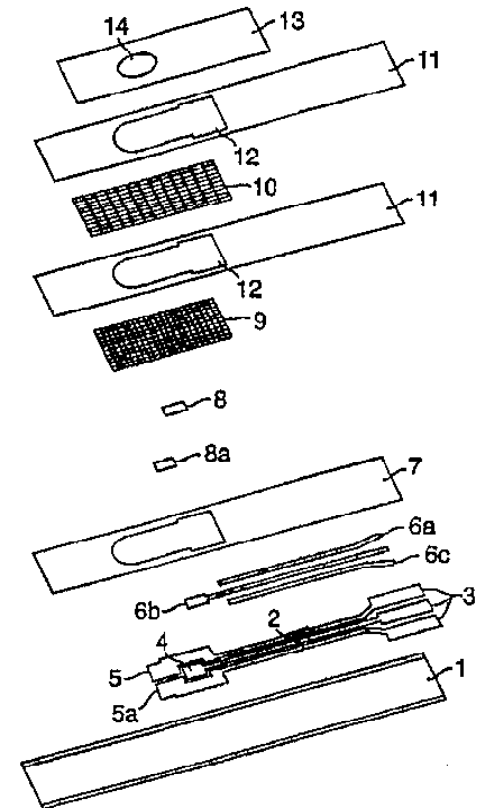
FIG. 6C



Post-KSR Obviousness in Federal Courts

TheraSense v. B.D. (2009-1008, 1009, 1010, 1034, 1035, 1036, 1037; January 10, 2010)

- Court affirms denial of Patentee's JMOL on invalidity
 - Invention addresses “short fill” problem in blood-glucose testing – solution is to put counter electrode “downstream” from the working electrode
 - Special Verdict: “Have defendants proven by clear and convincing evidence that [the claims] are invalid by reason of anticipation or obviousness? Answer: “Yes”
 - Problem: Jury instruction on anticipation was wrong (said a reference anticipates if the element *could* be arranged as claimed) – but was it prejudicial



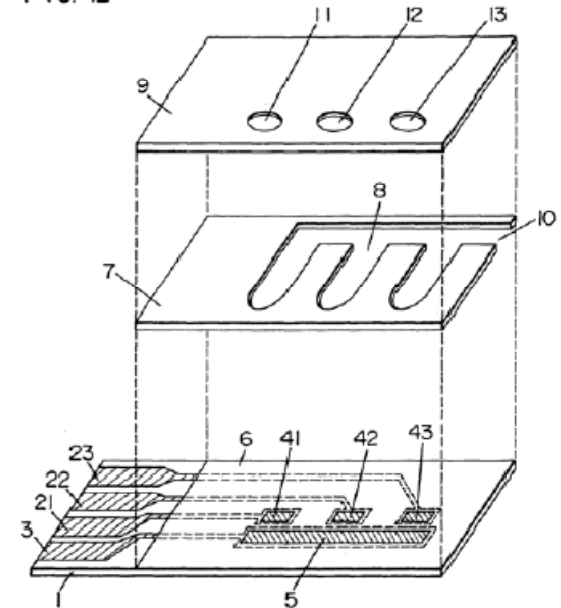


Post-KSR Obviousness in Federal Courts

TheraSense v. B.D. (2009-1008, 1009, 1010, 1034, 1035, 1036, 1037; January 10, 2010)

- Lower Court Affirmed – no prejudice because claims obvious as a matter of law
 - Prior art: blood enters port 10, flows forward through each of three channels 8, crosses working electrodes 41, 42, 43, then across counter electrode 5 and out ports 11, 12, 13
 - Missing element is “covering layer having an aperture for receiving sample” – found in a different example from same prior art
 - Obvious as a matter of law – “Because the jury could not have returned a different verdict, the district court’s erroneous instruction on the law of anticipation could not have changed the result.”

FIG. 12

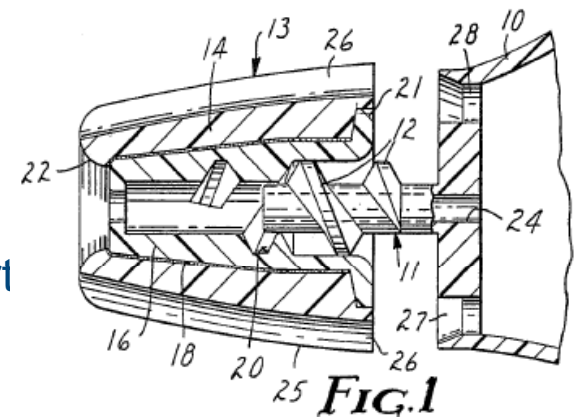




Post-KSR Obviousness in Federal Courts

Hearing Components v. Shure (2009-1364, 1365; April 1, 2010)

- Conflicting Expert Testimony Provides Sufficient Evidence for Jury to Find Claims Non-Obvious
 - P’s Expert: Not all claim limitations are met, art does not enter ear canal but only engages proximal end
 - P’s Expert: No motivation to combine because art to be added related to the testing of hearing, not improvement of sound quality.
 - No legal requirement for explicit teaching, suggestion, or motivation to combine – but “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine”
 - Hear, P’s Expert showed contrary – reason not to combine.



OBVIOUSNESS STANDARD POST -KSR

APPLYING KSR TO PATENT PROSECUTION

Karen Canaan, CanaanLaw, P.C.
Stafford Seminar, April 14, 2010

KSR v. Teleflex

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- Pre-KSR, the TSM test controlled obviousness determinations.
- Post-KSR, obviousness determinations are based upon the predictability of the invention and whether the ordinary artisan would have a reasonable expectation of successfully arriving at the claimed invention based upon the teachings of the cited references.

KSR v. Teleflex & Examination

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- Changes to Obviousness Examinations post-KSR
 - TSM no longer the standard for obviousness examinations.
 - The problem that the inventor was trying to solve no longer controls the scope of the prior art search.
 - Obviousness examinations are now based upon 7 examination guidelines promulgated by the USPTO in response to KSR.
 - Creativity & common sense are factors in the obvious determinations (leading Examiners to sometimes use their own knowledge to fill in missing elements).
 - “Obvious-to-try” is now a valid ground for a rejection.
 - Citations of non-analogous art in other fields is now sanctioned.

KSR v. Teleflex & Rebuttals

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- Changes to Obviousness Rebuttals post-KSR
 - TSM is no longer the standard for obviousness rebuttals.
 - The unpredictability of the invention and the assertion that the ordinary artisan would not have a reasonable expectation of arriving at the claimed invention from the teachings of the references now controls the rebuttal arguments.
 - Arguing that a reference “teaches away” is now a viable rebuttal argument.
- Evidence of unexpected results remains a strong option for rebuttal arguments.
- Rebuttal arguments of hindsight reconstruction and extraordinary skill in the art remain valid rebuttals.

Setting up the OA Response

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1. Refer to Examination Guidelines to determine which of the seven Guidelines the Examiner is using for the basis of the obviousness rejection.

Exam Guideline A: Combinations

40

- A. Combining prior art elements according to known methods to yield predictable results.
 1. The prior art includes each element as claimed, although not in a single reference.
 2. One of ordinary skill in the art could have combined the elements as claimed by known methods & in combination, each element would have performed the same function as it did separately.
 3. One of ordinary skill in the art would have found recognized that the results of the combination were predictable.
 4. *Graham* factors.
- The first examination guideline addresses rejections where elements from one or more references are combined to arrive at the claimed invention.
- The Examination Guidelines provide that a reason should be articulated as to why the ordinary artisan would combine the elements in the way that claimed new invention does.
 - Combining a collection of old elements into a single device is not obvious if the art teaches away from doing so.

Exam Guideline B: Substitution

41

- B. Simple substitution of one known element for another to obtain predictable results.
 1. The prior art contained a device (method, product, etc.), which differed from the claimed device by the substitution of some components (step, element, etc.) with other components.
 2. The substituted components & their functions were known in the art.
 3. One of ordinary skill in the art could have substituted one known element for another and the results of the substitution would have been predictable.
 4. *Graham* factors.
- The second examination guideline addresses rejections where an element from a secondary reference is substituted into the teaching from the primary reference.
- The Examination Guidelines provide that at least the primary reference should suggest that the modification could be successful.
 - ▣ Even in an unpredictable field, a reasonable expectation of success may justify the rejection.

Exam Guideline C: Skill Level

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- c. Use of known technique to improve similar devices (methods, or products) in the same way.
 1. The prior art contained a “base” device (method, or product) upon which the claimed invention can be seen as an “improvement.”
 2. The prior art contained a “comparable” device (method, or product that is not the same as the base device) that was improved in the same way as the claimed invention.
 3. One of ordinary skill in the art could have applied the known “improvement” technique in the same way to the “base” device (method, or product) and the results would have been predictable to one of ordinary skill in the art.
 4. *Graham* factors.
- The third examination guideline addresses rejections where the improvement relating to the invention is within the skill level of the ordinary artisan.
- The Examination Guidelines provide that if the application of the technique is beyond the skill level of the ordinary artisan then the technique is not obvious.

Exam Guideline D:Common Knowledge

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- D. Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results.
 1. The prior art contained a “base” device (method, or product) upon which the claimed invention can be seen as an “improvement.”
 2. The prior art contained a “known technique” that is applicable to the base device (method, or product).
 3. One of ordinary skill in the art would have recognized that applying the known technique would have yielded predictable results and resulted in an improved system.
 4. *Graham* factors.
- The fourth examination guideline addresses rejections where the Examiner has the opportunity to apply common knowledge to the rejection.
- The Examination Guidelines provide that a claim is obvious if a particular known technique was recognized as part of the ordinary capabilities of one skilled in the art.

Exam Guideline E: Obvious to Try

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- E. “Obvious to Try” - Choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success.
 1. At the time of the invention, there had been a recognized problem or need in the art, which may include a design need or market pressure to solve a problem.
 2. There had been a finite number of identified, predictable potential solutions to the recognized need or problem.
 3. One of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success.
 4. *Graham* factors.
- The fifth “obvious to try” examination guideline addresses another rejection where the Examiner has the opportunity to apply common knowledge to the rejection.
- The Examination Guidelines emphasize that the unpredictability of a procedure may be obviated when there are only a “finite” number of solutions to solve a problem and the testing of the solutions is within the skill level of the ordinary artisan.

Exam Guideline F: Analogous Elements

45

- F. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art.
 1. The scope and content of the prior art, whether in the same field of endeavor as that of the applicant's invention or a different field of endeavor, included a similar or analogous device (method, or product).
 2. There were design incentives or market forces that would have prompted adaptation of the known device (method, or product).
 3. The differences between the claimed invention and the prior art were encompassed in known variations or in a principle known in the art.
 4. One of ordinary skill in the art, in view of the identified design incentives or other market forces, could have implemented the claimed variation of the prior art, and the claimed variation would have been predictable to one of ordinary skill in the art.
 5. *Graham* factors.
- The sixth examination guideline includes rejections that cite non-analogous art.
- The Examination Guidelines cite Leapfrog & KSR as a representative of rejections brought under this Guideline.
 - LeapFrog combined electrical & mechanical elements to arrive at the claimed electronic toy.
 - KSR combined two mechanical elements to arrive at the claimed adjustable pedal assembly.

Exam Guideline G: TSM

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- G. Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention (TSM).
 1. There was some teaching, suggestion, or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings.
 2. There was a reasonable expectation of success.
 3. *Graham* factors.
- The seventh examination guideline addresses rejections that use the TSM test.

Setting up the OA Response

1. Review the law cited in the Examination Guidelines to determine if the Examiner has properly applied the law and/or applied the appropriate Examination Guideline.
2. Use the law, rather than the Examiner's arguments, as your guideline for preparing the response.
3. Set up the Office Action by citing the appropriate holding from KSR.
4. Use additional case law to support arguments within the text of the response, e.g., case law relating to teaching away, unexpected results, hindsight reconstruction, common knowledge, etc.

Citing KSR

- A rationale to support a conclusion that a claim would have been obvious is that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded nothing more than predictable results to one of ordinary skill in the art. *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 401 (2007); see also, *KSR* 550 U.S. at 415-417 (2007) citing *Great Atlantic & P. Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. 147, 152 (1950), *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57, 62-63 (1969), and *Sakraida v. AG Pro, Inc.*, 425 U.S. 273, 282 (1976).

Teaching Away

- Useful for Responding to Examination Guidelines A-G.
- “A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994); see *KSR*, 550 U.S. 398, 416 (2007) (explaining that when the prior art teaches away from a combination, that combination is more likely to be nonobvious). Additionally, a reference may teach away from a use when that use would render the result inoperable. *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1354 (Fed. Cir. 2001).
- That the inventor achieved the claimed invention by doing what those skilled in the art suggested should not be done is a fact strongly probative of nonobviousness. *Kloster Speedsteel AB v. Crucible, Inc.*, 793 F.2d 1565, 230 USPQ 81 (Fed. Cir. 1986), *on rehearing*, 231 USPQ 160 (Fed. Cir. 1986).

Teaching Away (cont'd)

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- A reference should be considered in whole, and portions arguing against or teaching away from the claimed invention must be considered. *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 230 USPQ 416 (Fed. Cir. 1986).
- The patentee “persisted against the accepted wisdom, and succeeded.” *Arkie Lures, Inc. v. Gene Larew Tackle, Inc.*, 119 F.3d 953, 43 USPQ 2d 1294 (Fed. Cir. 1997).
- If a first prior art reference “did in fact teach away from [a second prior art reference], then that finding alone can defeat [an] obviousness claim” based on a combination of the two references. *Winner International Royalty Corp. v. Wang*, 202 F.3d 1340, 53 USPQ2d 1580 (Fed. Cir. 2000). (Exam Guidelines A & B)
- “But, here, unlike in KSR, the prior art did not provide a finite number of identified, predictable solutions; rather, it disclosed a broad selection of compounds any of which could have been selected as a lead compound. The closest prior art “directed one of ordinary skill in the art away from that compound.” Therefore, it was not “obvious to try” the prior art compound. *Takeda Chemical Industries, Ltd. v. Alphapharm Pty., Ltd.*, 492 F.3d 1350

Unexpected Results

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- Useful for Responding to Examination Guidelines A-G.
- Most commonly used in chemical/biotech cases.
- Rebuttal of a case of prima facie obviousness based on structural similarity can consist of a comparison of test data showing that the claimed compositions possess unexpectedly improved properties or properties that the prior art does not have. *In re Dillon*, 919 F.2d 688 (Fed. Cir. 1990) (en banc), *cert. denied*, 500 U.S. 904 (1991).
- That a claimed combination (e.g., of A and B) showed an additive result when a diminished result would have been expected is persuasive of nonobviousness even though the result may be equal to that of one component alone. *In re Corkill*, 771 F.2d 1496 (Fed. Cir. 1985). (Helpful if rebuttal arguments of unexpected results are based on the unexpected synergistic effect of the claimed combination.)
- “Given a presumption of similar properties for similar compositions, substantially improved properties are *ipso facto* unexpected.” *In re Soni*, 54 F.3d 746 (Fed. Cir. 1995).

Hindsight Reconstruction

- Useful for responding to Examination Guidelines A-G.
- It is well-established that an obviousness analysis that relies upon the applicant's disclosure rather than the prior art reference is improper as being based upon an impermissible hindsight reconstruction. *In re Deuel*, 51 F.3d 1551, 1558 (Fed. Cir. 1995).
- A single line in a prior art reference should not be taken out of context and relied upon with the benefit of hindsight. *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443 (Fed. Cir. 1986).
- Using the inventor's success as evidence that one of ordinary skill in the art would have reasonably expected success represents an impermissible use of hindsight. *Life Technologies, Inc. v. Clontech Laboratories, Inc.*, 224 F.3d 1320 (Fed. Cir. 2000).
- One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988); *In re Fritch*, 972 F.2d 1260 (Fed. Cir. 1992). (Exam Guidelines A)

Hindsight Reconstruction (cont'd)

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- It is impermissible to engage in a hindsight reconstruction of the claimed invention by using the applicant's structure as a template and selecting elements from references to fill in the gaps. *In re Gorman*, 933 F.2d 892 (Fed. Cir. 1991). (Exam Guideline B)
- The combination of elements from nonanalogous sources, in a manner that reconstructs the applicants invention only with the benefit of hindsight, is insufficient to present a *prima facie* case of obviousness. *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). (Exam Guideline F)
- A retrospective view of inherency is not a substitute for some teaching or suggestion that supports the selection and use of the various elements in the particular claimed combination. *In re Newell*, 891 F.2d 899 (Fed. Cir. 1989). (Exam Guideline G)
- Both the suggestion and the reasonable expectation of success "must be founded in the prior art, not in the applicant's disclosure." *In re Vaeck*, 947 F.2d 488, 473 (Fed. Cir. 1991). (Exam Guideline G)

Ordinary, not Extraordinary Skill

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- Useful for responding to Examination Guideline C.
- Factors pertinent to the level of skill element of the *Graham* obviousness analysis include (1) educational level of the inventor, (2) type of problems encountered in the art, (3) prior art solutions to those problems, (4) rapidity with which innovations are made, (5) sophistication of the technology, and (6) education level of workers active in the field. *Environmental Design, Ltd. v. Union Oil Co. of Calif.*, 713 F.2d 693 (Fed. Cir. 1983).
- A person of ordinary skill in the art is “one who thinks along the line of conventional wisdom in the art and is not one who undertakes to innovate...” *Standard Oil Co. v. American Cyanamid Co.*, 774 F.2d 448 (Fed. Cir. 1985).
- “A person of ordinary skill is also a person of ordinary creativity, not an automaton.” *KSR*, 550 U.S. 398, 421 (2007).

Common Knowledge Assertions

- Useful for responding to Examination Guideline D.
- Where an Examiner chooses to take notice of facts beyond the record for the *prima facie* case, those facts must be “capable of such instant and unquestionable demonstration as to defy dispute.” *In re Alhert*, 24 F.2d 1099, 1091 (CCPA 1970). It is **not** appropriate for an Examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well-known are not capable of *instant and unquestionable demonstration as being well-known*. *Id.* For example, assertions of technical facts in esoteric technology or specific knowledge of the prior art must always be supported by citation to some reference work recognized as standard in the pertinent art. *Id.*; see also, MPEP § 2144.03, 8th ed., Aug. 2001, Rev. Feb. 2003, pp. 2100-131-2100-132; *In re Grose*, 592 F.2d 1161, 1167-1168 (CCPA 1979) (“[W]hen the PTO seeks to rely upon a chemical theory, in establishing a prima facie case of obviousness, it must provide evidentiary support for the existence and meaning of the theory.”).

TSM: No Reasonable Expectation of Success

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- Useful for responding to Examination Guideline G.
- The Court of Appeals for the Federal Circuit has explained that the rationale to support a conclusion that a claim would have been obvious is that “a person of ordinary skill in the art would have been motivated to combine the prior art to achieve the claimed invention and that there would have been a reasonable expectation of success.” USPTO Examination Guidelines, 72 Fed. Reg. 195 (2007) quoting *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1360, 80 USPQ2d 1641, 1645 (Fed. Cir. 2006).
- A showing of obviousness requires a motivation or suggestion to combine or modify prior art references, coupled with a reasonable expectation of success...“While absolute certainty is not necessary to establish a reasonable expectation of success, [citations omitted] there can be little better evidence negating an expectation of success than actual reports of failure.” *Boehringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corp.*, 320 F.3d 1339 (Fed. Cir. 2003).

Conclusion

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- Review the Examination Guidelines to determine which line of reasoning the Examiner used to organize the OA.
- Determine the legal framework for the OA response based upon the Examination Guideline or Guidelines used by the Examiner.
- Review prior art references for discussions that teach away from the invention.
- Request verification of all common knowledge or judicial notice assertions.
- If appropriate, present evidence of unexpected results & argue hindsight reconstruction.
- With TSM arguments, emphasize that the ordinary artisan would have no reasonable expectation of success of arriving at the claimed invention from a reading of the cited references.
- If the inventor's own work is being cited against the application, argue that the art being cited represents the efforts of an extraordinary artisan.

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