

# Webinar: “Selected Salient Intellectual Property Issues that Scientists/Engineers and Their Managers, and Patent Professionals Need to be Aware of”

Presented by: Florida Photonics Cluster and  
Patents on Demand, P.A.

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# Provisional Patent Applications

When are they appropriate to use and when are they not appropriate to use?

# What is a Provisional Patent Application?

- ▶ Alternative to non-provisional utility as a first filed application
- ▶ Can function as a priority document if properly drafted
- ▶ Becomes abandoned after 12 months unless it is converted to another application (PCT or non-provisional)
  - Generally becomes publicly accessible if converted to non-provisional
  - Is never substantively examined

# Requirements

- ▶ Specification
- ▶ Drawings where “necessary”
  - Can only be determined after claims of non-provisional conversion are available
- ▶ Claims are NOT required, but
  - Provisional applications should generally include at least one broad claim
    - Protection against loss of filing date if improperly filed as non-provisional
    - Possible uncertainty outside of U.S. for providing priority without claims

# Pros and Cons of Provisionals

- ▶ Difference between patentable and un-patentable due to one-year grace period in the U.S.
  - Public disclosure
  - Public Sale
- ▶ Inexpensive (\$220 L.E.)
- ▶ Inventive details can be enhanced throughout the next 12 months for filing of the non-provisional or PCT
  - Provided the provisional provides broad enough support for the enhancement
- ▶ Pitfalls of poorly drafted provisionals
  - focus of provisional can be too limiting
  - too narrow, no broad support for claims in non-provisional
- ▶ Can be called into question during litigation
  - Can result in patent invalidity (see CAFC case described in next slide)

PROS

CONS

# NEW RAILHEAD MANUFACTURING, L.L.C. v. VERMEER MANUFACTURING COMPANY and Earth Tool Company, L.L.C.

- ▶ 2002 CAFC case
- ▶ Plaintiff invented new drill bit and sued for infringement
- ▶ Defendants argued invalidity based on a non-enabled provisional application
  - Relative to the claims in issued patent
- ▶ Plaintiff had offered drill bit for sale more than one-year before non-provisional filing date
  - Without properly enabled provisional, plaintiff's patent was invalidated

# Claims:

What a properly drafted claim set should protect,  
types of claims and why to generally avoid  
means-plus-function claims

# Types of Claims

- ▶ Four main categories under 35 U.S.C. 101
  - Process, Machine, Article of manufacture, and Composition of matter
- ▶ Can also be divided into tangible, intangible claims and “product-by-process” claims
  - Tangible claims generally have more value than intangible claims (ability to detect in a product to base infringement claim)
- ▶ Patent should have as many different types of claims as possible
  - A single claim can have different claim types within it
- ▶ Claims should be directed to company’s products as sold and used as well as the products as made
- ▶ Also should have at least one detailed independent claim (essentially a “picture claim”)

# Means-Plus-Function Claims

- ▶ Written in the format of a means for accomplishing a function
- ▶ Risks: very narrow scope of protection in the U.S.
  - Limited to the corresponding acts and structures in specification and structural equivalents thereof
  - Heightened invalidity risks
    - See *Net MoneyIn v. Verisign* 545 F.3d 1359 (Fed. Cir. 2008)
    - See *Biomedino v. Waters Technology* 490 F.3d 946, 952, 83 USPQ2d 1118, 1123 (Fed. Cir. 2007)
  - Doctrine of equivalents, i.e. Graver Tank equivalents, which generally broaden claim scope, may not be applicable
    - See *Interactive Pictures Corp. v. Infinite Pictures Inc.*, 274 F.3d 1371, 1381–82 (Fed. Cir. 2002)

# Means-Plus-Function Claims

- ▶ Means-Plus-Function Claims can have some value when used in conjunction with other tangible claim types
  - A means-plus-function claim essentially reads the specification disclosure, and thus should not be subject to a written description challenge
  - Are given a reasonably broad scope of protection in some foreign countries
    - Some value in a first-filed U.S. Patent Application that will be foreign filed.
- ▶ Should never be the only set of tangible claims
  - For an example of only means-plus-function tangible claims, see Published U.S. Pat. App. No. 20090034727 (Example A)
  - For an example of proper (non-means) tangible claims, see Published U.S. Pat. App No. 20090109895 (Example B)



20090034727(A).pdf



20090109895(B).pdf

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# Bilski Discussion

*In re Bilski*, 545 F.3d 943, 88 U.S.P.Q.2d 1385 (Fed. Cir. 2008)

# What Bilski States

- ▶ Under 35 U.S.C. §101 requires that a claimed process must be either:
  - (1.) “tied to a particular machine or apparatus;” or
  - (2.) “transform a particular article or substance into a different state or thing.”

# Practical Responses

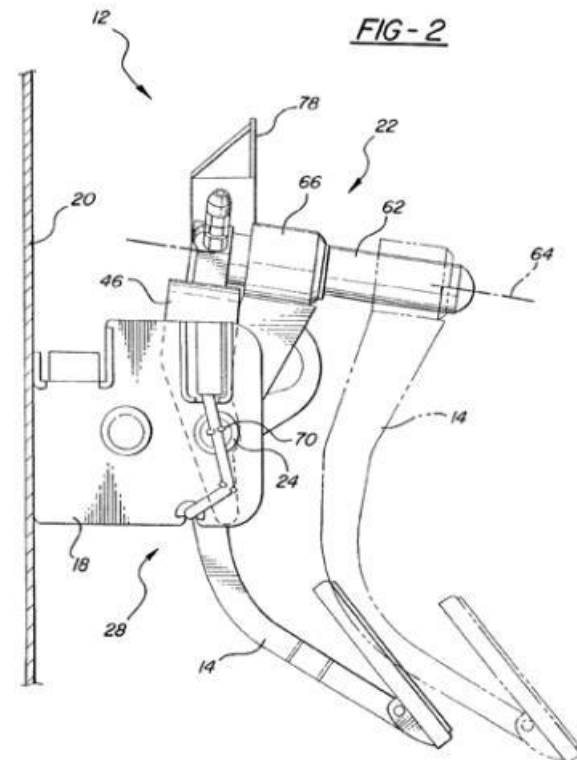
## Post Bilski

- ▶ Generally require “tied to a particular machine or apparatus”
- ▶ Arguments about transformations generally lose or are problematic
- ▶ Acceptable “benign” ties
  - computing equipment XXXXing (in front of method claims)
  - “via a processor executing computer program product instruction digitally encoded in a physical storage medium”
- ▶ Ensure applications include support for “data store”, “computing equipment”, “computer program products”
- ▶ Include claims to avoid invalidation of a patent re: Bilski-like argument
  - NOTE: Dependent claims work for this purpose, should you elect not to pay for additional independent claims

# KSR with a Focus on Software Ramifications

# Impact of New “Obviousness” Standard

- ▶ KSR v. Teleflex  
(S. Ct. 2006)
  - Claim to be electronic automobile pedal
  - Fed. Cir. Reversed finding of invalidity for obviousness under §103
    - Facts in dispute regarding motivation to combine



# KSR v. Teleflex – Decision

U.S. Supreme Court Decision (April 30, 2007)

- ▶ U.S. case law required “teaching–motivation–suggestion” (TSM) to modify what was known (“prior art”) to make claimed invention
- ▶ Supreme Court removed TSM as a requirement, and criticized “rigid” and “formalistic” way the test was applied in the Federal Circuit
- ▶ “Common sense” and “commercial considerations” can provide basis for finding an invention to have been obvious

# LEAPFROG ENTERPRISES, v. FISHER-PRICE, INC. and MATTEL, INC. (May 9, 2007)

- ▶ **“This combination of Bevan and the SSR lacks only the “reader” of claim 25 of the ’861 patent.”**
  - D.C. : “readers were well-known in the art at the time of the invention.”
- ▶ **“it would have been obvious to combine the Bevan device with the SSR to update it using modern electronic components in order to gain the commonly understood benefits of such adaptation”**
- ▶ D.C. : Leapfrog Enterprises provided substantial evidence of commercial success, praise, and long-felt need, but the evidence on secondary considerations was inadequate to overcome a final conclusion that claim 25 would have been obvious

# Practical Ramifications of KSR in Prosecution

- ▶ Patent Office citing multiple references, stating it would have been obvious to combine them for advantages received by a claimed application
- ▶ Increase in “word search” rejections with combined references
- ▶ Increase in “obvious” limitations, not taught by the references
- ▶ Examiner’s discounting attorney distinguishing aspects
- ▶ A near 100% first action reject–all–claims policy by most USPTO examiners

# Responding to a KSR Rejection

- ▶ Unexpected Result arguments – are given considerable weight
- ▶ Teaching Away arguments – have some weight
  - Emphasize with MPEP 2143.01 Sec 5 and/or Sec 6
- ▶ Use underlying technology to re-characterize nature of the change between references
  - Challenge obviousness based upon this re-characterization
- ▶ Can often help “support” MPEP 2143.01 arguments with language of “teaching away”
- ▶ Challenge “word search” rejections with MPEP 2106

# MPEP 2143.01 Sec. 5:



- ▶ **THE PROPOSED MODIFICATION CANNOT RENDER THE PRIOR ART UNSATISFACTORY FOR ITS INTENDED PURPOSE**

If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984) (Claimed device was a blood filter assembly for use during medical procedures wherein both the inlet and outlet for the blood were located at the bottom end of the filter assembly, and wherein a gas vent was present at the top of the filter assembly. The prior art reference taught a liquid strainer for removing dirt and water from gasoline and other light oils wherein the inlet and outlet were at the top of the device, and wherein a pet-cock (stopcock) was located at the bottom of the device for periodically removing the collected dirt and water. The reference further taught that the separation is assisted by gravity. The Board concluded the claims were *prima facie* obvious, reasoning that it would have been obvious to turn the reference device upside down. The court reversed, finding that if the prior art device was turned upside down it would be inoperable for its intended purpose because the gasoline to be filtered would be trapped at the top, the water and heavier oils sought to be separated would flow out of the outlet instead of the purified gasoline, and the screen would become clogged.).

# MPEP 2143.01 Sec. 6:

- ▶ **THE PROPOSED MODIFICATION CANNOT CHANGE THE PRINCIPLE OF OPERATION OF A REFERENCE**

If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959) (Claims were directed to an oil seal comprising a bore engaging portion with outwardly biased resilient spring fingers inserted in a resilient sealing member. The primary reference relied upon in a rejection based on a combination of references disclosed an oil seal wherein the bore engaging portion was reinforced by a cylindrical sheet metal casing. Patentee taught the device required rigidity for operation, whereas the claimed invention required resiliency. The court reversed the rejection holding the "suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate." 270 F.2d at 813, 123 USPQ at 352.).

# MPEP 2106

- ▶ Finally, when evaluating the scope of a claim, **every limitation in the claim must be considered. USPTO personnel may not dissect a claimed invention into discrete elements and then evaluate the elements in isolation.** Instead, the claim as a whole must be considered. See, e.g., *Diamond v. Diehr*, 450 U.S. 175, 188–89, 209 USPQ 1, 9 (1981) ("In determining the eligibility of respondents' claimed process for patent protection under § [101](#), their claims must be considered as a whole. It is inappropriate to dissect the claims into old and new elements and then to ignore the presence of the old elements in the analysis. This is particularly true in a process claim because a new combination of steps in a process may be patentable even though all the constituents of the combination were well known and in common use before the combination was made.").

# Additional Practical Solutions in Software

- ▶ Crafting claims to avoid “word search” rejections
- ▶ Craft Application to include KSR defeating arguments/language
- ▶ Ensure Application shows a tailored “overview/system” figure, definitions for claimed limitations, figures for claimed concepts
  - Basically ensure application is “strong” and de-emphasize “boiler plate” substitutes for supportive material
- ▶ Use of dependent claims to include definition-laden (semi-benign) limitations

# Additional Practical Solutions in Software

- ▶ Citation of non-art references (when existent) to support that those of ordinary skill in the art have not found the solution “obvious”
- ▶ Situational use of 132 Declarations to define “obvious” in the art
- ▶ Increased use of personal interviews or at least teleconference interviews including supervisors, when appropriate
  - Force interviews to cover prosecution problems and do not accept “sounds good, write it up” assurances from Examiners.
- ▶ Challenge More Final Rejections with MPEP 706.07(a)

# MPEP 706.07 (a):

- ▶ Under present practice, second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims, nor based on information submitted in an information disclosure statement filed during the period set forth in [37 CFR 1.97\(c\)](#) with the fee set forth in [37 CFR 1.17\(p\)](#).

# Questions

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