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35 U.S.C. 102 & 103 Workshop

Virtual Instructor Led Training (VILT)

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102 & 103 Training Objectives

This training is intended to reinforce good practices for identifying and making proper anticipation and obviousness rejections.

Like the recent 102 and 103 lecture training, this workshop is designed to address issues that have been identified in recent quality reviews.

Technology-Specific Examples

Chemical

Electrical

Mechanical

Click a button to move to the example

Chemical Example A:

Claim 1

1. A method of treating a skin disorder comprising topically administrating, at the site of the disorder, a composition comprising:

a therapeutically effective dosage amount of indomethacin sufficient to inhibit prostaglandin synthesis, and

an amount of Compound A or a pharmaceutically acceptable salt of Compound A that is effective to transport the dosage amount of indomethacin percutaneously into the epidermis.

References A1

- The Martinez reference teaches treating inflammation of the skin by topical administration of a composition comprising (a) an amount of indomethacin that is sufficient to reduce inflammation, and (b) an amount of Compound A that is effective to transport the indomethacin through the skin and into the epidermis
- The Henley reference teaches that non-steroidal anti-inflammatory drugs (NSAIDs) including indomethacin reduce inflammation by inhibiting prostaglandin synthesis

Chemical Example A: Discussion A1

Q1. Can an anticipation rejection over Martinez be made given that the Henley reference is needed to establish that reduction of inflammation as taught by Martinez results from inhibition of prostaglandin synthesis?

Chemical Example A: Discussion A1 (*cont.*)

Q1. Can an anticipation rejection over Martinez be made given that the Henley reference is needed to establish that reduction of inflammation as taught by Martinez results from inhibition of prostaglandin synthesis?

Yes

- Martinez teaches all claim limitations. The "amount of indomethacin sufficient to inhibit prostaglandin synthesis" is inherently taught by Martinez.
- Henley does not add any elements in addition to those taught by Martinez. Henley merely establishes that the amount of indomethacin required by the claim is inherently taught by Martinez. See MPEP § 2131.01.
- Also note that since Henley merely establishes an inherent property of indomethacin, it is not necessary that the Henley reference be prior art to claim 1.

Chemical Example A: Discussion A1 (*cont.*)

Q2. Should an obviousness rejection be made over Martinez in view of Henley?

Chemical Example A: Discussion A1 (*cont.*)

Q2. Should an obviousness rejection be made over Martinez in view of Henley?

No

An obviousness rejection would not be appropriate because no modification of the teaching of Martinez is needed to meet the limitations of claim 1.

Chemical Example A:

Claim 1

1. A method of treating a skin disorder comprising topically administrating, at the site of the disorder, a composition comprising:

a therapeutically effective dosage amount of indomethacin sufficient to inhibit prostaglandin synthesis, and

an amount of Compound A or a pharmaceutically acceptable salt of Compound A that is effective to transport the dosage amount of indomethacin percutaneously into the epidermis.

Reference A2

The Brooks reference teaches treating inflammation of the skin by topical administration of a composition comprising (a) an amount of indomethacin that is sufficient to inhibit prostaglandin synthesis, and (b) an amount of a transport compound that is effective to transport the indomethacin through the skin and into the epidermis. The composition is administered at the site of the inflammation. Brooks states that indomethacin is an NSAID, and that any known transdermal transport compound for NSAIDs can be used in the composition. Brooks describes a clinical trial in which a composition comprising indomethacin and Compound C was topically administered at the affected site for effective treatment of the skin disorder rosacea. Brooks also mentions that Compound A and Compound B, which are not known for use in the field of percutaneous transport of NSAIDs, are structurally similar to Compound C. On this basis, Brooks suggests that it might be worthwhile to consider Compounds A and B as possible transdermal transport compounds for NSAIDs.

Chemical Example A: Discussion A2

Q1. Does it matter that Brooks does not mention “a therapeutically effective dosage amount” of indomethacin?

Chemical Example A: Discussion A2 (*cont.*)

Q1. Does it matter that Brooks does not mention "a therapeutically effective dosage amount" of indomethacin?

- Since the rosacea treatment exemplified by Brooks was effective, it appears that the claim limitation as to the amount of indomethacin was met.
- However, it should be remembered that claims must be construed in light of the specification. If the "amount of indomethacin" in light of the specification is different from the amount taught by the Brooks reference, then Brooks does not meet the "amount of indomethacin" limitation. Remember that construing the claim in light of the specification does not mean that unclaimed features may be imported from the specification into the claim. An amount that is mentioned only in a particular working example in the specification would ordinarily not limit the "amount of indomethacin" of the claim. However, if there were a special definition in the specification of the phrase "amount of indomethacin," then the claim would properly be interpreted as limited to that amount.

Chemical Example A: Discussion A2 (*cont.*)

Q2. Since Brooks suggests it might be worthwhile to consider Compound A as a possible transdermal transport compound, can an anticipation rejection be made assuming that the other claim limitations are met?

Chemical Example A: Discussion A2 (*cont.*)

Q2. Since Brooks suggests it might be worthwhile to consider Compound A as a possible transdermal transport compound, can an anticipation rejection be made assuming that the other claim limitations are met?

No

- Brooks does not actually disclose a method within the scope of the claim. A mere suggestion that it might be "worthwhile to consider" Compound A is not an unambiguous assertion that Compound A is usable in a method as claimed. Thus, Brooks cannot be used as the basis for an anticipation rejection.
- However, Brooks could be the basis for an obviousness rejection based on replacing Compound C as taught in the clinical trial with Compound A as suggested by Brooks. The examiner should identify the appropriate passage of Brooks and clearly explain that Brooks provides a reason (structural similarity) why PHOSITA would expect Compound A to be substitutable for Compound C in a method as claimed.

Chemical Example A:

Claim 1

1. A method of treating a skin disorder comprising topically administrating, at the site of the disorder, a composition comprising:

a therapeutically effective dosage amount of indomethacin sufficient to inhibit prostaglandin synthesis, and

an amount of Compound A or a pharmaceutically acceptable salt of Compound A that is effective to transport the dosage amount of indomethacin percutaneously into the epidermis.

Reference A3

The Trotz reference teaches that skin disorders in general may be treated by topical administration of a composition comprising (a) an NSAID in an amount that is sufficient to inhibit prostaglandin synthesis, and (b) an amount of Compound A that is effective to transport the NSAID through the skin and into the epidermis. In two separate working examples, Trotz teaches treating eczema and psoriasis, both of which are skin disorders, by administration of a composition comprising the NSAID naproxen and Compound A. Trotz also describes administration of a composition comprising indomethacin and Compound A to patients suffering from the skin disorder rosacea; Trotz states that administering the composition comprising indomethacin and Compound A increased the skin redness that is a primary symptom of rosacea.

Chemical Example A: Discussion A3 (*cont.*)

Q1. Trotz specifically discloses that indomethacin and Compound A were administered to a patient suffering from rosacea. Assuming that the amounts administered are within the scope of the claim, is this disclosure sufficient to support an anticipation rejection?

Chemical Example A: Discussion A3 (*cont.*)

Q1. Trotz specifically discloses that indomethacin and Compound A were administered to a patient suffering from rosacea. Assuming that the amounts administered are within the scope of the claim, is this disclosure sufficient to support an anticipation rejection?

No

- First, the claim preamble cannot be ignored when it breathes life and meaning into a claim. According to the preamble, the claim is a "method of treating a skin disorder." The Trotz indomethacin example does not meet the claim because it does not result in treatment of rosacea.
- Second, it could also be argued that the amount of indomethacin in the Trotz example was not "therapeutically effective" as required by the claim because the skin redness increased.

Chemical Example A: Discussion A3 (*cont.*)

Q2. Could a 35 U.S.C. 103 rejection of claim 1 be made over Trotz?

Chemical Example A: Discussion A3 (*cont.*)

Q2. Could a 35 U.S.C. 103 rejection of claim 1 be made over Trotz?

No

The only example that uses indomethacin and Compound A is not effective for treating the skin disorder rosacea. A teaching away cannot support an obviousness rejection.

Chemical Example B:

Claims

Claim 1. A pharmaceutical composition comprising cytotoxic drug X and polyol Y as a stabilizing agent, wherein polyol Y is present in an amount of up to about 75% by weight.

Claim 2. The pharmaceutical composition of claim 1, wherein polyol Y is present in an amount of about 50% by weight.

Claim 3. The pharmaceutical composition of claim 1, wherein polyol Y is present in an amount of about 25% by weight.

Reference B1

The Bowey reference teaches a composition comprising drug X and polyol Y, wherein polyol Y is used as a stabilizing agent and is present in an amount of about 23% by weight. The composition may be used to treat lung cancer.

Chemical Example B: Discussion B1 (*cont.*)

Q1. For the purpose of either a 35 U.S.C. 102 or a 103 rejection, does it matter that Bowey fails to state that drug X is cytotoxic?

Chemical Example B: Discussion B1 (*cont.*)

Q1. For the purpose of either a 35 U.S.C. 102 or a 103 rejection, does it matter that Bowey fails to state that drug X is cytotoxic?

No

Cytotoxicity is an inherent property of the drug. In this case, the Bowey reference states that the composition is useful for treating lung cancer, so that is an indication that the drug is cytotoxic. However, even if that statement were absent, the "drug X" limitation would be met.

Chemical Example B: Discussion B1 (*cont.*)

Q2. Bowey's teaching of "about 23% by weight" of polyol Y meets the polyol limitation of claim 1. It does not meet the polyol limitation of claim 2. What about claim 3?

Chemical Example B: Discussion B1 (*cont.*)

Q2. Bowey's teaching of "about 23% by weight" of polyol Y meets the polyol limitation of claim 1. It does not meet the polyol limitation of claim 2. What about claim 3?

The question is whether "about 23%" as taught by Bowey meets the "about 25%" limitation of claim 3. This is a matter of claim construction. As always, claims must be construed in light of the specification. Quite often the term "about" is used in claims but is not explicitly defined in the specification. In such situations, the examiner needs to consider whether a PHOSITA would reasonably have understood what is meant by "about." When there is prior art that arguably meets the claim, an art-based rejection should be made in the interest of compact prosecution even if an indefiniteness rejection is made.

Chemical Example B: Discussion B1 (*cont.*)

Q2. Bowey's teaching of "about 23% by weight" of polyol Y meets the polyol limitation of claim 1. It does not meet the polyol limitation of claim 2. What about claim 3? (*cont.*)

On these facts, both an anticipation rejection and an obviousness rejection could probably be made

- For the anticipation rejection, the "about 23%" as taught by Bowey is within the scope of "about 25%" as required by claim 3.
- For the obviousness rejection, the examiner would need to explain clearly that the "about 25%" as required by claim 3 is reasonably suggested by "about 23%" as taught by Bowey because Bowey's use of the modifier "about" indicates that a precise amount is not required for operability. In other words, it is evident in view of the record that no criticality is associated with the amount of polyol Y required by the claim. Rather, in view of the teaching of Bowey, PHOSITA would have understood that any amount close to 23%, such as "about 25%" as in claim 3, would reasonably be expected to be effective. Therefore PHOSITA would have chosen to formulate the composition of Bowey with "about 25%" by weight of polyol Y as required by claim 3.

Chemical Example B:

Claims

Claim 1. A pharmaceutical composition comprising cytotoxic drug X and polyol Y as a stabilizing agent, wherein polyol Y is present in an amount of up to about 75% by weight.

Claim 2. The pharmaceutical composition of claim 1, wherein polyol Y is present in an amount of about 50% by weight.

Claim 3. The pharmaceutical composition of claim 1, wherein polyol Y is present in an amount of about 25% by weight.

References B2

The Soto reference is prior art to claims 1-3. It discloses a composition comprising X, Y, and water, wherein Y is present in an amount of 50% by weight. Soto says that the composition is useful as a food additive.

The Rodriguez reference teaches food additives comprising X' (a compound that is highly structurally similar to X and of the same chemical class), Y, and water, wherein Y is present in an amount of 15-50% by weight. Rodriguez provides an example of a food additive comprising 25% of X', Y, and water.

Chemical Example B: Discussion B2 (*cont.*)

Q1. For the purpose of a 35 U.S.C. 102 rejection, does the Soto composition meet the claim limitations as to ingredients and amounts?

Chemical Example B: Discussion B2 (*cont.*)

Q1. For the purpose of a 35 U.S.C. 102 rejection, does the Soto composition meet the claim limitations as to ingredients and amounts?

Yes, for claims 1 and 2.

The claims use open language "comprising," so inclusion of water in the Soto composition does not remove it from the scope of claims 1 and 2. The claims do not specifically limit the amount of X. The amount of Y in Soto is within the scope of claims 1 and 2.

It would probably not be reasonable to assert that 50% by weight as taught by Soto meets the "about 25% by weight" limitation of **claim 3.**

Chemical Example B: Discussion B2 (*cont.*)

Q2. For the purpose of a 35 U.S.C. 102 rejection, does it matter that Soto does not state that X is a cytotoxic drug, that Y is a stabilizing agent, or that the composition disclosed is a "pharmaceutical composition"?

Chemical Example B: Discussion B2 (*cont.*)

Q2. For the purpose of a 35 U.S.C. 102 rejection, does it matter that Soto does not state that X is a cytotoxic drug, that Y is a stabilizing agent, or that the composition disclosed is a "pharmaceutical composition"?

No

- The term "cytotoxic drug" in the claim simply states an inherent property of X. Similarly, as long as Y is present in an amount of the claim, it is inherently a stabilizing agent. Note that the claim language does not require any particular amount of X, as long as it is present.
- The phrase "pharmaceutical composition" in the claim preamble cannot be ignored because it breathes life and meaning into the claim. However, the teaching of Soto that the composition disclosed is useful as a food additive makes it clear that despite the open language "comprising," the Soto composition does not include any components that would make it unfit for administration as a pharmaceutical composition.

Chemical Example B: Discussion B2 (*cont.*)

Q3. Could an obviousness rejection of claim 3 be made over Soto in view of Rodriguez?

Chemical Example B: Discussion B2 (*cont.*)

Q3. Could an obviousness rejection of claim 3 be made over Soto in view of Rodriguez?

Yes, if the references are analogous art <u>to the claimed invention</u>, and the examiner clearly explains why PHOSITA would have been motivated to combine the teachings.

It appears that the references could be combined to suggest a food additive composition comprising X, Y, and water, wherein Y is present in an amount of 25% by weight.

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Chemical Example B: Discussion B2 (*cont.*)

Q3. (*cont.*)

However, the issue here is one of analogous art. Recall that although analogous art is not a requirement for an anticipation rejection, the analogous art requirement must be satisfied for a proper obviousness rejection.

- Both Soto and Rodriguez are in the field of food additives
- However, that fact does not answer the analogous art question, which requires that each reference either be in the same field of endeavor as **the claimed invention**, or reasonably pertinent to the problem to be solved by the claimed invention. See MPEP § 2141.01(a).
- It is not sufficient that the references be in the same field of endeavor as each other. If it could be reasonably argued that the pharmaceutical composition field of the claim and the food additive field of the references are the same, perhaps because Applicant's specification indicates that pharmaceutical compositions are intended to include so-called nutraceuticals (foods with pharmaceutical properties), then an obviousness rejection could be defensible. Alternatively, it could be argued that the problem to be solved with respect to claim 3 is how to make a stabilized composition comprising X, Y, and water, and that this is the same problem as that addressed by the references. The examiner must provide a clear explanation of his or her position.

Chemical Example B:

Claims

Claim 1. A pharmaceutical composition comprising cytotoxic drug X and polyol Y as a stabilizing agent, wherein polyol Y is present in an amount of up to about 75% by weight.

Claim 2. The pharmaceutical composition of claim 1, wherein polyol Y is present in an amount of about 50% by weight.

Claim 3. The pharmaceutical composition of claim 1, wherein polyol Y is present in an amount of about 25% by weight.

Reference B3

The Satoransky reference teaches that the efficacy of cytotoxic drug X for treatment of lung cancer is enhanced when it is administered concurrently with polyol Y. According to Satoransky, "concurrently" means that X and Y are administered to the patient either at the same time or within one hour of each other. Furthermore, Satoransky teaches that it is advantageous to administer the same amount of X and Y by weight. However, Satoransky does not teach a composition that comprises X and Y.

Chemical Example B: Discussion B3 (*cont.*)

Q1. Does Satoransky teach the relative amounts of X and Y as required by the claims?

Chemical Example B: Discussion B3 (*cont.*)

Q1. Does Satoransky teach the relative amounts of X and Y as required by the claims?

Yes as to claims 1 and 2.

No as to claim 3.

Chemical Example B: Discussion B3 (*cont.*)

Q2. Can an anticipation rejection of claims 1 and 2 be made over Satoransky?

Chemical Example B: Discussion B3 (*cont.*)

Q2. Can an anticipation rejection of claims 1 and 2 be made over Satoransky?

Probably not, depending on the details of Satoransky's disclosure regarding concurrent administration.

- Although Satoransky teaches co-administration of X and Y for a medical reason, Satoransky does not teach a pharmaceutical composition comprising the two ingredients.
- However, if for instance Satoransky's teaching of concurrent administration included an example of intravenous (IV) infusion wherein both X and Y were added to the same IV bag before infusion was started, then the contents of the bag would be a pharmaceutical composition that anticipates claims 1 and 2.

Chemical Example B: Discussion B3 (*cont.*)

Q3. Can the claims be rejected as obvious over Satoransky even though Satoransky does not teach that Y is a stabilizing agent?

Chemical Example B: Discussion B3 (*cont.*)

Q3. Can the claims be rejected as obvious over Satoransky even though Satoransky does not teach that Y is a stabilizing agent?

As to claims 1 and 2, it would probably be reasonable.

A reason would have to be provided as to why PHOSITA would have combined X and Y into a single pharmaceutical composition. The reason could be ease of administration for the medical staff, coupled with enhanced patient safety due to the reduced chance for dosage error.

As for claim 3, **it would probably not be reasonable** to assert that Satoransky meets or suggests the "about 25% by weight" limitation of claim 3.

Chemical Examples: Takeaways for 102 and 103 Training

- Anticipation
  - Need for proper claim construction
  - Anticipation requires an express or inherent disclosure of every claim limitation
  - Anticipation requires a sufficiently precise and detailed description of the invention in a single reference
  - An ambiguous reference does not anticipate
  - It is improper to read unclaimed elements into a claim when conducting an anticipation analysis
  - To anticipate, a reference must provide every element of the claimed invention arranged as in the claimed invention
- Obviousness
  - Need for proper claim construction
  - Need for clear articulation of the rejection, including
    - citation of evidence,
    - reasoned explanations, and
    - factual findings

Electrical Example A:

Claim 1

1. An apparatus for managing nodes in a network comprising:

a cryptography system for encrypting data to be transmitted through the network, and

a network reservation system for identifying a plurality of next nodes in the network based on a destination for the encrypted data,

wherein the plurality of next nodes are indirectly connected to a source node from which the encrypted data is sent to the destination via at least one other node, the destination being among the plurality of next nodes, and

wherein the network reservation system further selectively implements pre-reserved paths along the plurality of next nodes for transmitting the encrypted data.

Reference A1

- The Carpenter reference teaches a cryptography system configured to encrypt data to be transmitted through a network, wherein the encrypted data is transmitted without decryption until the encrypted data arrives at the destination.
- Separate from the teaching of the cryptography system, Carpenter also teaches a network reservation system which identifies nodes and employs selective implementation of pre-reserved paths for transmitting data in a switch network. Carpenter further states that such selective implementation is useful for enhancing the efficiency of the network.

Electrical Example A: Discussion A1

Q1. When considering whether to do an anticipation rejection, does it matter that the reference does not specifically refer to an apparatus “for managing nodes in a network” as recited in the claim preamble?

Electrical Example A: Discussion A1 (*cont.*)

Q1. When considering whether to do an anticipation rejection, does it matter that the reference does not specifically refer to an apparatus "for managing nodes in a network" as recited in the claim preamble?

No, as long as the reference teaches all of the elements as arranged in the claim, and the elements inherently constitute an apparatus "for managing nodes in a network." Note that preamble language that breathes life and meaning into a claim cannot be ignored. If the preamble language materially changes what the claimed invention is, then it is a limitation that must be considered. However, if the preamble merely states the Inventor's intended use, it does not further limit the scope of the claim.

Although the question asks about anticipation, it is also true that a mere statement of intended use does not further limit the scope of the claim when analyzing for obviousness.

Electrical Example A: Discussion A1 (*cont.*)

Q2. Should an anticipation rejection be made over Carpenter?

Electrical Example A: Discussion A1 (*cont.*)

Q2. Should an anticipation rejection be made over Carpenter?

No

- It is not clear how the system of Carpenter is being implemented because Carpenter does not teach a single apparatus that includes all of the limitations; the disclosed cryptography system and network reservation system are not specifically disclosed in a single apparatus.
  - A proper anticipation rejection must be based on a disclosure in a single reference of all of the elements of the claimed invention arranged as in the claimed invention. It is improper to combine separate inventions or embodiments within a disclosure, absent a suggestion to do so, for the purposes of anticipation.
- Furthermore, Carpenter does not teach that the disclosed network reservation system identifies a plurality of next nodes wherein the plurality of next nodes are indirectly connected to a source node.

Electrical Example A:

Claim 1

1. An apparatus for managing nodes in a network comprising:

a cryptography system for encrypting data to be transmitted through the network, and

a network reservation system for identifying a plurality of next nodes in the network based on a destination for the encrypted data,

wherein the plurality of next nodes are indirectly connected to a source node from which the encrypted data is sent to the destination via at least one other node, the destination being among the plurality of next nodes, and

wherein the network reservation system further selectively implements pre-reserved paths along the plurality of next nodes for transmitting the encrypted data.

References A2

- The Buckhantz reference teaches a cryptography system configured to encrypt data to be transmitted through a network, wherein the encrypted data is transmitted through a plurality of successive elements without decryption until the encrypted data arrives at the destination. In order to enhance the efficiency of the network, the cryptography system of Buckhantz identifies the plurality of successive elements and utilizes selectively implemented pre-reserved paths for transmitting the data.
- The Lawson reference teaches that successive elements through which data is transmitted in a network are “successive next nodes.”

Electrical Example A: Discussion A2

Q1. Can an anticipation rejection be made given that the Lawson reference is needed to establish that the successive elements as taught by Buckhantz constitute "successive next nodes" as required by the claim?

Electrical Example A: Discussion A2 (*cont.*)

Q1. Can an anticipation rejection be made given that the Lawson reference is needed to establish that the successive elements as taught by Buckhantz constitute "successive next nodes" as required by the claim?

Yes

- Buckhantz teaches all claim limitations. Nodes are inherently taught by Buckhantz.
- Lawson does not add any elements in addition to those taught by Buckhantz. Lawson merely establishes that the nodes required by the claim are inherently taught by Buckhantz. See MPEP § 2131.01.

Electrical Example A: Discussion A2 (*cont.*)

Q2. Should an obviousness rejection be made over Buckhantz in view of Lawson?

Electrical Example A: Discussion A2 (*cont.*)

Q2. Should an obviousness rejection be made over Buckhantz in view of Lawson?

No

An obviousness rejection would not be appropriate because no modification of the teaching of Buckhantz is needed to meet the limitations of claim 1.

Electrical Example A:

Claim 1

1. An apparatus for managing nodes in a network comprising:

a cryptography system for encrypting data to be transmitted through the network, and

a network reservation system for identifying a plurality of next nodes in the network based on a destination for the encrypted data,

wherein the plurality of next nodes are indirectly connected to a source node from which the encrypted data is sent to the destination via at least one other node, the destination being among the plurality of next nodes, and

wherein the network reservation system further selectively implements pre-reserved paths along the plurality of next nodes for transmitting the encrypted data.

Reference A3

- The Walton reference teaches several methods for efficient management of nodes in a network for transmission of encrypted data. One of the methods is identifying a plurality of next nodes and selective implementation of pre-reserved paths along the plurality of next nodes.

Electrical Example A: Discussion A3

Q1. Does the Walton reference teach all of the claim limitations?

Electrical Example A: Discussion A3 (*cont.*)

Q1. Does the Walton reference teach all of the claim limitations?

No

Even if it could be argued that Walton inherently discloses the network reservation system limitations, Walton does not teach "a cryptography system for encrypting data." Walton appears to be concerned with handling the data after it has been encrypted.

Electrical Example A: Discussion A3 (*cont.*)

Q2. Should an anticipation rejection be made over Walton?

Electrical Example A: Discussion A3 (*cont.*)

Q2. Should an anticipation rejection be made over Walton?

No

Walton does not disclose all elements of the claimed invention. Specifically, Walton fails to disclose the claimed cryptography system.

Electrical Example A: Discussion A3 (*cont.*)

Q3. If the phrase "a cryptography system for encrypting data" is determined to invoke 112(f) and the claim is rejected under 112(b) for lack of corresponding structure in the specification, must that limitation be considered when evaluating the claim for patentability over the prior art?

Electrical Example A: Discussion A3 (*cont.*)

Q3. If the phrase "a cryptography system for encrypting data" is determined to invoke 112(f) and the claim is rejected under 112(b) for lack of corresponding structure in the specification, must that limitation be considered when evaluating the claim for patentability over the prior art?

Yes

An indefinite claim limitation cannot be ignored when considering anticipation or obviousness over the prior art.

Electrical Example B:

Claims 1-3

Claim 1. A semiconductor chip redistribution layer comprising an electrical conductor path, the electrical conductor path comprising copper and one additional conductive material, wherein the additional conductive material is present in an amount of at least about 0.5% by weight of the electrical conductor path

Claim 2. The semiconductor chip redistribution layer of claim 1, wherein the additional conductive material is tantalum.

Claim 3. The semiconductor chip redistribution layer of claim 1 or 2, wherein the electrical conductor path has a tensile strength of more than 100 MPa.

Reference B1

- The Puck reference discloses a semiconductor chip redistribution layer which comprises an electrical conductor path made of 99% copper and 1% tantalum by weight.

Electrical Example B: Discussion B1

Q1. Does it matter that the Puck reference does not explicitly teach that tantalum is a conductive material?

Electrical Example B: Discussion B1 (*cont.*)

Q1. Does it matter that the Puck reference does not explicitly teach that tantalum is a conductive material?

No

PHOSITA would recognize that metals which comprise an electrical conductor path are conductors. For those who are unfamiliar with this technology, note that claim 2 states that tantalum is conductive.

Electrical Example B: Discussion B1 (*cont.*)

Q2. Can an anticipation rejection of claim 3 be made over Puck even though the reference does not mention tensile strength?

Electrical Example B: Discussion B1 (*cont.*)

Q2. Can an anticipation rejection of claim 3 be made over Puck even though the reference does not mention tensile strength?

It is not necessary for the Puck reference to mention tensile strength **if** the "tensile strength of more than 100 MPa" of claim 3 is an inherent property of the 99% copper and 1% tantalum electrical conductor path taught by Puck. However, in order to make the anticipation rejection, it must be established that the claimed tensile strength is indeed an inherent property.

If inherency cannot be established, it would be appropriate to make an obviousness rejection.

Electrical Example B: Discussion B1 (*cont.*)

Q3. Assume that inherency cannot be established to meet the tensile strength of claim 3 with Puck. However, there is a reference to Hattrick that teaches it being known in the semiconductor redistribution layer art to use a conductor path made of copper and a Group 5 metal where the conductor path has a tensile strength of 80-120 MPa for the advantage of minimizing breakage of the electrical conductor path. Can Puck and Hattrick be combined to render claim 3 obvious?

Electrical Example B: Discussion B1 (*cont.*)

Q3. Assume that inherency cannot be established to meet the tensile strength of claim 3 with Puck. However, there is a reference to Hattrick that teaches it being known in the semiconductor redistribution layer art to use a conductor path made of copper and a Group 5 metal where the conductor path has a tensile strength of 80-120 MPa for the advantage of minimizing breakage of the electrical conductor path. Can Puck and Hattrick be combined to render claim 3 obvious?

Yes

Both Puck and Hattrick are analogous art to the claimed invention because they are in the same field of endeavor as the claimed invention, namely semiconductor chip redistribution layering. A PHOSITA would have been motivated to modify the conductor path of Puck to have a tensile strength of 80-120 MPa, as taught by Hattrick, to achieve the predictable result of minimizing breakage of the electrical conductor path.

Electrical Example B:

Claims 1-3

Claim 1. A semiconductor chip redistribution layer comprising an electrical conductor path, the electrical conductor path comprising copper and one additional conductive material, wherein the additional conductive material is present in an amount of at least about 0.5% by weight of the electrical conductor path

Claim 2. The semiconductor chip redistribution layer of claim 1, wherein the additional conductive material is tantalum.

Claim 3. The semiconductor chip redistribution layer of claim 1 or 2, wherein the electrical conductor path has a tensile strength of more than 100 MPa.

Reference B2

- According to the disclosure by Hardball, a semiconductor chip redistribution layer may be made which comprises an electrical conductor path comprising 99% copper, 0.4% tantalum, and 0.1% niobium by weight.

Electrical Example B: Discussion B2

Q1. Does Hardball's teaching of "0.4% tantalum . . . by weight" meet the requirement of claim 1 of "at least about 0.5% by weight"?

Electrical Example B: Discussion B2 (*cont.*)

Q1. Does Hardball's teaching of "0.4% tantalum . . . by weight" meet the requirement of claim 1 of "at least about 0.5% by weight"?

- This is a matter of claim construction. As always, claims must be construed in light of the specification. Quite often the term "about" is used in claims but is not explicitly defined in the specification. In such situations, it needs to be considered as to whether PHOSITA would reasonably understand what is meant by "about." When there is prior art that arguably meets the claim, an art-based rejection should be made in the interest of compact prosecution even if an indefiniteness rejection is made.
- On these facts, both an anticipation rejection and a backup obviousness rejection should be made, including clear explanations of both.

Electrical Example B: Discussion B2 (*cont.*)

Q2. Does it matter to the anticipation analysis that claim 1 states that the electrical conductor path comprises copper and "one additional conductive material," while Hardball discloses a composition comprising two conductive materials in addition to copper?

Electrical Example B: Discussion B2 (*cont.*)

Q2. Does it matter to the anticipation analysis that claim 1 states that the electrical conductor path comprises copper and "one additional conductive material," while Hardball discloses a composition comprising two conductive materials in addition to copper?

It depends on proper claim construction

Proper claim construction is a necessary prerequisite for proper application of prior art. Claims must always be construed in light of the specification. In claim 1, the open language "comprising" is somewhat in tension with the recitation of "one additional conductive material." What is important is that the claim is analyzed in light of the specification, and then a clear statement on the record is made as to how the claim is being interpreted. If the claim is interpreted to mean that one additional conductive material is required, but other conductive materials are permitted, then it would be appropriate to reject the claims as anticipated by Hardball.

Electrical Example B:

Claims 1-3

Claim 1. A semiconductor chip redistribution layer comprising an electrical conductor path, the electrical conductor path comprising copper and one additional conductive material, wherein the additional conductive material is present in an amount of at least about 0.5% by weight of the electrical conductor path.

Claim 2. The semiconductor chip redistribution layer of claim 1, wherein the additional conductive material is tantalum.

Claim 3. The semiconductor chip redistribution layer of claim 1 or 2, wherein the electrical conductor path has a tensile strength of more than 100 MPa.

Reference B3

- The Roundball reference teaches a semiconductor chip redistribution layer which comprises an electrical conductor path made of 99% copper and at least 0.5% of a Group 5 metal by weight. The tensile strength of the electrical conductor path taught by Roundball is about 150 MPa.
- Persons of ordinary skill in the semiconductor art know that the naturally occurring Group 5 metals on the periodic table of elements are vanadium, niobium, and tantalum.

Electrical Example B: Discussion B3

Q1. Can an anticipation rejection of claim 1 be made given that the Roundball reference does not explicitly identify the Group 5 metals?

Electrical Example B: Discussion B3 (*cont.*)

Q1. Can an anticipation rejection of claim 1 be made given that the Roundball reference does not explicitly identify the Group 5 metals?

Yes

Roundball teaches all claim limitations. The "one additional conductive material" limitation of the claim is met by the Roundball teaching of a Group 5 metal. It would be incorrect to read claim 1 as requiring any limitation beyond what is included. Thus Roundball does not need to mention any specific conductive material in order to meet claim 1.

Electrical Example B: Discussion B3 (*cont.*)

Q2. Could an anticipation rejection be made for claim 2 over Roundball?

Electrical Example B: Discussion B3 (*cont.*)

Q2. Could an anticipation rejection be made for claim 2 over Roundball?

An anticipation rejection of claim 2 could be justified because the genus "Group 5 metal" of the Roundball reference is small. It could be argued that to PHOSITA, the phrase "Group 5 metal" as used in Roundball is a shorthand way of stating that each of vanadium, niobium, and tantalum is usable in the disclosed semiconductor chip redistribution layer.

However, in a situation where the examiner considers the genus to be too large or ill-defined to be an unambiguous disclosure of all of the members, then it may be appropriate to make an obviousness rejection. In that situation an anticipation rejection should not be made.

Electrical Example B: Discussion B3 (*cont.*)

Q3. Could an anticipation rejection be made for claim 3 over Roundball?

Electrical Example B: Discussion B3 (*cont.*)

Q3. Could an anticipation rejection be made for claim 3 over Roundball?

Yes

- Insofar as claim 3 depends from claim 1, the limitations are certainly met.
- Insofar as claim 3 depends from claim 2, the anticipation rejection could be made based on the reasoning that to PHOSITA, the phrase "Group 5 metal" as used in Roundball is a shorthand way of stating that each of vanadium, niobium, and tantalum is usable in the disclosed semiconductor chip redistribution layer.

Electrical Examples: Takeaways for 102 and 103 Training

- Anticipation
  - Need for proper claim construction
  - Anticipation requires an express or inherent disclosure of every claim limitation
  - Anticipation requires a sufficiently precise and detailed description of the invention in a single reference
  - An ambiguous reference does not anticipate
  - It is improper to read unclaimed elements into a claim when conducting an anticipation analysis
  - To anticipate, a reference must provide every element of the claimed invention arranged as in the claimed invention
- Obviousness
  - Need for proper claim construction
  - Need for clear articulation of the rejection, including
    - citation of evidence,
    - reasoned explanations, and
    - factual findings

Mechanical Example A:

Claim 1

1. An armlet comprising:

a first pouch configured to securely hold a smartphone while enabling usage thereof; and

a second pouch configured to contain an auxiliary power supply, wherein said auxiliary power supply and said smartphone are configured to be in operative communication,

wherein said armlet is made substantially of leather and provides protection against impact, abrasion, or another hazard to a forearm when worn.

Note: The specification states that an armlet is a wearable item designed to cover and protect the forearm. Additionally, the forearm, as defined in the specification, is from the elbow to the wrist of an adult user.

Reference A1

- The Harper reference teaches a leather armlet that may be worn on the forearm comprising a pouch configured to hold a smartphone or other electronic device securely. The armlet of Harper may optionally comprise a second pouch for holding additional items such as an auxiliary power supply. The additional item held in the second pouch can be in operative communication with the electronic device held in the first pouch. Harper does not state in words that the smartphone is usable when in the armlet, but the figure in the Harper reference clearly shows that the armlet is designed so that the controls of the smartphone can be accessed when the smartphone is in the armlet.

Mechanical Example A: Discussion A1

Q1. Does it matter for the purpose of an anticipation rejection that Harper states that the second pouch is optional?

Mechanical Example A: Discussion A1 (*cont.*)

Q1. Does it matter for the purpose of an anticipation rejection that Harper states that the second pouch is optional?

No

It is reasonable to interpret the reference as teaching an armlet with two pouches, as well as an armlet with one pouch. The fact that the reference teaches an embodiment with only one pouch does not detract from its teaching of an armlet with two pouches.

Mechanical Example A: Discussion A1 (*cont.*)

Q2. Does it matter for the purpose of an anticipation rejection that Harper does not state that the smartphone is usable when in the armlet?

Mechanical Example A: Discussion A1 (*cont.*)

Q2. Does it matter for the purpose of an anticipation rejection that Harper does not state that the smartphone is usable when in the armlet?

No

The claim limitation regarding usability while the smartphone is in the armlet cannot be ignored. However, in this situation the figure makes it clear that the limitation is met. When making an anticipation rejection, there should be an explanation as to how the figure shows that the usability limitation is met.

Mechanical Example A: Discussion A1 (*cont.*)

Q3. Does it matter for the purpose of an anticipation rejection that Harper does not state that the armlet protects against "impact, abrasion, or another hazard to a forearm when worn"?

Mechanical Example A: Discussion A1 (*cont.*)

Q3. Does it matter for the purpose of an anticipation rejection that Harper does not state that the armlet protects against "impact, abrasion, or another hazard to a forearm when worn"?

No

Function follows structure. Since the structural limitations (i.e., the leather material in the form of an armlet) are met by the reference, then it may be reasonably concluded that the functional limitations are also met.

Mechanical Example A:

Claim 1

1. An armlet comprising:

a first pouch configured to securely hold a smartphone while enabling usage thereof; and

a second pouch configured to contain an auxiliary power supply, wherein said auxiliary power supply and said smartphone are configured to be in operative communication,

wherein said armlet is made substantially of leather and provides protection against impact, abrasion, or another hazard to a forearm when worn.

Note: The specification states that an armlet is a wearable item designed to cover and protect the forearm. Additionally, the forearm, as defined in the specification, is from the elbow to the wrist of an adult user.

Reference A2

- Ovechkin teaches a holder for a smartphone that is designed as a detachable component of a larger item such as a backpack, tote bag, briefcase, or purse. The holder comprises a first pouch configured to hold a smartphone. The holder may optionally comprise a second pouch to hold additional items such as an auxiliary power supply. The additional item held in the second pouch can be in operative communication with the smartphone held in the first pouch. Ovechkin provides an example of a leather purse with a detachable leather holder, and also teaches that the smartphone may be used while in the holder. The holder of Ovechkin also includes a thin leather strap so that when the holder is detached, a person can carry it by inserting a hand through the strap and allowing the holder to dangle from the wrist.

Mechanical Example A: Discussion A2

Q1. Is the preamble phrase "[a]n armlet" a limitation that must be considered when evaluating the prior art?

Mechanical Example A: Discussion A2 (*cont.*)

Q1. Is the preamble phrase "[a]n armlet" a limitation that must be considered when evaluating the prior art?

Yes

Although it is not necessary that the prior art use the term "armlet," the device taught by the prior art must function as an armlet.

- The specification should be reviewed for any special definition of the term, and if there is none, then the term should be given its ordinary and customary meaning in the art. If there is any question about how the term would have been understood by a person of ordinary skill, it should be stated on the record how the term is being interpreted.
- Note that when a preamble term is used again in the body of the claim, as it is in this example, it is a good indication that the term is more than a mere statement of intended use. Recall, though, that every case must be decided on its own facts. Restatement of a preamble term in the body of the claim does not necessarily mean that the term is limiting. Likewise, failure to repeat a preamble term in the body of the claim does not necessarily mean that the term is a mere statement of intended use.

Mechanical Example A: Discussion A2 (*cont.*)

Q2. Is the holder of Ovechkin inherently an armlet even though that term is not used?

Mechanical Example A: Discussion A2 (*cont.*)

Q2. Is the holder of Ovechkin inherently an armlet even though that term is not used?

No, unless there is a special definition provided in the specification that would encompass a thin strap worn around the wrist. Otherwise, to equate the thin leather strap of Ovechkin to the claimed armlet would be an overly broad interpretation of armlet.

- Even though the holder can be worn on the wrist when detached from the larger item, and the wrist could reasonably be considered to be a part of the forearm, the holder is not designed to provide protection to a forearm and would not inherently provide such protection when worn dangling from the wrist. According to the claim, this particular armlet must protect against "impact, abrasion, or another hazard to a forearm" when worn.
- In order for a reference to anticipate based on inherency, the allegedly inherent element must necessarily be met by the reference. It is not sufficient that the element might possibly be met.
- Thus, an argument that a forearm could be protected from "impact, abrasion, and another hazard," when the holder is carried dangling from the wrist, would not be appropriate because any such protection would happen only by chance.

Mechanical Example A:

Claim 1

1. An armlet comprising:

a first pouch configured to securely hold a smartphone while enabling usage thereof; and

a second pouch configured to contain an auxiliary power supply, wherein said auxiliary power supply and said smartphone are configured to be in operative communication,

wherein said armlet is made substantially of leather and provides protection against impact, abrasion, or another hazard to a forearm when worn.

Note: The specification states that an armlet is a wearable item designed to cover and protect the forearm. Additionally, the forearm, as defined in the specification, is from the elbow to the wrist of an adult user.

Reference A3

- The Beal reference teaches an athletic sleeve that incorporates a pouch configured to hold a smartphone or other electronic device securely. The sleeve of Beal may optionally comprise a second pouch to hold additional items such as an auxiliary power supply. The additional item held in the second pouch can be in operative communication with the electronic device held in the first pouch. Beal states that the smartphone is usable when in the pouch. According to Beal, the sleeve and the pouch may be made of any suitable material known for use in the field of athletic wear. The stated benefits of Beal's athletic sleeve include protection against sunburn, insect bites, and chafing.

Mechanical Example A: Discussion A3

Q1. Is it proper to argue that leather is one of a small number of materials known for use in the field of athletic wear, such that the "leather" limitation of the claim may be considered met by the Beal reference even though it is not explicitly mentioned?

Mechanical Example A: Discussion A3 (*cont.*)

Q1. Is it proper to argue that leather is one of a small number of materials known for use in the field of athletic wear, such that the "leather" limitation of the claim may be considered met by the Beal reference even though it is not explicitly mentioned?

Probably not

In order to make such an argument, there would need to be a showing that the genus of "suitable material[s] known for use in the field of athletic wear" would have been well-understood by PHOSITA as representing a small and well-defined list of species. The species that make up the genus would also need to be identified.

Mechanical Example A: Discussion A3 (*cont.*)

Q2. Assume that Beal had additionally taught that the athletic sleeve could be made of leather. Could the athletic sleeve of Beal be considered to meet the "armlet" limitation?

Mechanical Example A: Discussion A3 (*cont.*)

Q2. Assume that Beal had additionally taught that the athletic sleeve could be made of leather. Could the athletic sleeve of Beal be considered to meet the "armlet" limitation?

Maybe, depending on claim construction

Proper anticipation rejections depend on proper claim construction. The specification should be reviewed for any special definition of the term "armlet," and if there is none then the term should be given its ordinary and customary meaning in the art. Absent a special definition, if the athletic sleeve of Beal functions as an armlet, then it may be appropriate to consider the athletic sleeve of Beal to be an armlet for the purpose of an anticipation rejection.

Mechanical Example A: Discussion A3 (*cont.*)

Q3. Assume that Beal had taught that the athletic sleeve could be made of leather. Also assume that the broadest reasonable interpretation of "armlet" in light of the specification would include an athletic sleeve. Would an anticipation rejection be appropriate given that the claim requires "protection against impact, abrasion, or another hazard," while the Beal reference teaches "protection against sunburn, insect bites, and chafing"?

Mechanical Example A: Discussion A3 (*cont.*)

Q3. Assume that Beal had taught that the athletic sleeve could be made of leather. Also assume that the broadest reasonable interpretation of "armlet" in light of the specification would include an athletic sleeve. Would an anticipation rejection be appropriate given that the claim requires "protection against impact, abrasion, or another hazard," while the Beal reference teaches "protection against sunburn, insect bites, and chafing"?

Yes

It does not matter that Beal fails to mention protection against impact or abrasion because the leather sleeve of Beal would inherently provide protection against impact and abrasion. Furthermore, sunburn, insect bites, and chafing are probably within the scope of "another hazard" as required by the claim.

Mechanical Example B:

Claim 1

A microscope slide handling system comprising:

a plurality of slide supports, each support comprising a surface for supporting a microscope slide bearing a biological sample and a heating element that underlies the surface so as to transfer heat to a microscope slide resting on the surface;

at least one reagent dispenser that can dispense a liquid reagent onto a microscope slide on one of the slide supports;

a movable carriage that causes the reagent dispenser to be aligned over a desired microscope slide on one of the slide supports, so that reagent dispensed out of the reagent dispenser drops onto an underlying microscope slide on one of the slide supports;

wherein the movable carriage permits relative motion between the at least one reagent dispenser and a microscope slide on one of the slide supports so that the at least one reagent dispenser is aligned over the microscope slide on one of the slide supports to dispense reagent onto the microscope slide; and

wherein the heating elements are capable of being heated at specified times and each heating element is capable of being heated to a different temperature than the other heating elements.

Reference B1

- Professor Holtby is a mineralogist. Non-patent literature to Holtby teaches that analysis of thin sections of mineralogical samples may be carried out with the microscope slide handling system that he describes. The Holtby microscope slide handling system meets all the limitations required by the claim except for the microscope slides bearing biological samples.

Mechanical Example B: Discussion B1

Q1. Could an anticipation rejection be made over Holtby?

Mechanical Example B: Discussion B1 (*cont.*)

Q1. Could an anticipation rejection be made over Holtby?

Probably so

- This is a matter of claim construction. The claim is drawn to a system for handling slides, and must be capable of heating slides, dispensing a reagent onto slides, and moving slides. However, the claim as drafted does not appear to require the slides themselves. If the examiner concludes that slides are not required, then the mention of "for supporting a microscope slide bearing a biological sample" merely concerns intended use, and the Holtby reference would anticipate the claim.

Mechanical Example B: Discussion B1 (*cont.*)

Q2. Does Holtby have to be analogous art to the claimed invention in order to make a proper anticipation rejection?

Mechanical Example B: Discussion B1 (*cont.*)

Q2. Does Holtby have to be analogous art to the claimed invention in order to make a proper anticipation rejection?

No

Analogous art is not a factor in anticipation rejections.

Mechanical Example B: Discussion B1 (*cont.*)

Q3. If Holtby were to be used in an obviousness rejection, either alone or in combination with another reference, would Holtby have to be analogous art to the claimed invention?

Mechanical Example B: Discussion B1 (*cont.*)

Q3. If Holtby were to be used in an obviousness rejection, either alone or in combination with another reference, would Holtby have to be analogous art to the claimed invention?

Yes

- Recall that the analogous art requirement for references to be used in obviousness rejections is that the reference must either be in the same field of endeavor as the claimed invention, or be reasonably pertinent to the problem to be solved by the claimed invention. See MPEP § 2141.01(a).
- If the Holtby reference were used in an obviousness rejection, the examiner would need to explain clearly that both the claimed invention and the teaching of Holtby are in the field of microscope slide handling systems and Holtby is, therefore, analogous art to the claimed invention.

Mechanical Example B:

Claim 1

A microscope slide handling system comprising:

a plurality of slide supports, each support comprising a surface for supporting a microscope slide bearing a biological sample and a heating element that underlies the surface so as to transfer heat to a microscope slide resting on the surface;

at least one reagent dispenser that can dispense a liquid reagent onto a microscope slide on one of the slide supports;

a movable carriage that causes the reagent dispenser to be aligned over a desired microscope slide on one of the slide supports, so that reagent dispensed out of the reagent dispenser drops onto an underlying microscope slide on one of the slide supports;

wherein the movable carriage permits relative motion between the at least one reagent dispenser and a microscope slide on one of the slide supports so that the at least one reagent dispenser is aligned over the microscope slide on one of the slide supports to dispense reagent onto the microscope slide; and

wherein the heating elements are capable of being heated at specified times and each heating element is capable of being heated to a different temperature than the other heating elements.

Reference B2

- A patent to Scherzer teaches a microscope slide handling system substantially as recited in the claim. However, the liquid reagent that Scherzer teaches dispensing onto a microscope slide is water.

Mechanical Example B: Discussion B2

Q1. Assume that the specification of the application being examined specifically defines “reagent” as a fluorescent, radioactive, or chromogenic label for a biological sample. Does the Scherzer patent anticipate?

Mechanical Example B: Discussion B2 (*cont.*)

Q1. Assume that the specification of the application being examined specifically defines "reagent" as a fluorescent, radioactive, or chromogenic label for a biological sample. Does the Scherzer patent anticipate?

Yes, provided that the reagent dispenser component of Scherzer's microscope slide handling system is capable of dispensing a fluorescent, radioactive, or chromogenic label that is in liquid form.

Although the claim must be construed in light of the special definition for "reagent" provided in the specification, it is not necessary for Scherzer to teach dispensing a fluorescent, radioactive, or chromogenic label as long as the Scherzer system is capable of dispensing such reagents.

Mechanical Example B: Discussion B2 (*cont.*)

Q2. Assume that the specification of the application being examined specifically defines "reagent" as a fluorescent, radioactive, or chromogenic label for a biological sample, and additionally states that the reagent dispenser of the invention is specially designed to accommodate reagents such as these that are more dense than water. The specification explains that the reagent dispenser component of the claimed invention is an improvement over known reagent dispensers because it allows for more precise delivery of drops of liquid reagents that are more dense than water.

Does the Scherzer reference anticipate the claim?

Mechanical Example B: Discussion B2 (*cont.*)

Q2. Does the Scherzer reference anticipate the claim?

Yes, provided that the reagent dispenser component of Scherzer's microscope slide handling system is capable of dispensing a reagent as claimed. There would need to be an explanation as to why this capability is necessarily inherent in the microscope slide handling system of Scherzer. The explanation could be supported with an additional reference that would not necessarily have to be prior art.

Note that although the claim requires that the reagent dispenser be able to dispense drops of reagents that are denser than water, it does not include any limitation as to how precisely the drops must be dispensed.

Mechanical Example B:

Claim 1

A microscope slide handling system comprising:

a plurality of slide supports, each support comprising a surface for supporting a microscope slide bearing a biological sample and a heating element that underlies the surface so as to transfer heat to a microscope slide resting on the surface;

at least one reagent dispenser that can dispense a liquid reagent onto a microscope slide on one of the slide supports;

a movable carriage that causes the reagent dispenser to be aligned over a desired microscope slide on one of the slide supports, so that reagent dispensed out of the reagent dispenser drops onto an underlying microscope slide on one of the slide supports;

wherein the movable carriage permits relative motion between the at least one reagent dispenser and a microscope slide on one of the slide supports so that the at least one reagent dispenser is aligned over the microscope slide on one of the slide supports to dispense reagent onto the microscope slide; and

wherein the heating elements are capable of being heated at specified times and each heating element is capable of being heated to a different temperature than the other heating elements.

Reference B3

- A patent to Wall teaches a microscope slide handling system that meets all of the structure and function recited in the claim with respect to the slide supports, reagent dispenser, and movable carriage and the functional limitations with respect to relative motion between the reagent dispenser and microscope slides on the slide supports. Wall also teaches heating elements contained within the plurality of slide supports that can be set individually to a desired temperature.

Mechanical Example B: Discussion B3

Q1. Does Wall anticipate the claimed invention?

Mechanical Example B: Discussion B3 (*cont.*)

Q1. Does Wall anticipate the claimed invention?

There is a good argument that Wall anticipates the claimed invention.

- Given the disclosure of individually setting the heating elements to a desired temperature, PHOSITA would at once envisage that either all of the heating elements are at the same temperature or they are not.
- In other words, Wall could reasonably be interpreted as teaching a system wherein the heating elements are all at the same temperature, as well as a system wherein they are not all at the same temperature.
- There may be some situations in which both an anticipation and an obviousness rejection are appropriate. If the examiner chooses to make both rejections then the examiner's position must be clearly set forth with regard to anticipation and obviousness.

Mechanical Example B: Discussion B3 (*cont.*)

Q2. Assume that the only working example in the Wall patent is not directed to "heating of one heating element to a different temperature than another," but instead maintains all of the heating elements at the same temperature.

Does Wall anticipate?

Mechanical Example B: Discussion B3 (*cont.*)

Q2. Does Wall anticipate?

There is still a good argument that Wall anticipates the claimed invention.

- A disclosure of an embodiment of the invention wherein all of the heating elements are at the same temperature does not detract from the disclosure of individually controllable heating elements.
- It would still be reasonable to make an anticipation rejection.

Mechanical Examples: Takeaways for 102 and 103 Training

- Anticipation
  - Need for proper claim construction
  - Anticipation requires an express or inherent disclosure of every claim limitation
  - Anticipation requires a sufficiently precise and detailed description of the invention in a single reference
  - An ambiguous reference does not anticipate
  - It is improper to read unclaimed elements into a claim when conducting an anticipation analysis
  - To anticipate, a reference must provide every element of the claimed invention arranged as in the claimed invention
- Obviousness
  - Need for proper claim construction
  - Need for clear articulation of the rejection, including
    - citation of evidence,
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    - factual findings

Question?

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