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C. Instructions Specific to this Particular Exam

1. Structure

The final examination is designed to be three hours in length. It consists of one integrated fact pattern and an assignment from a law firm partner relating to that fact pattern.

2. Suggested Time Allocation

The emphasis of this examination is roughly proportional to the emphasis of the areas of patent law covered in class.

3. Use a new BlueBook (or, if typing and allowed by the exam taking software, use its mechanisms to create a page break) before your analysis of each major area of law Start a new bluebook before beginning your analysis of each major area or logical

subdivision. Remember to put your personal identification number on the cover of the bluebook.

4. Even if you do not read the "Background" and "Dispute" sections before starting, it is strongly recommended that you read the "Assignment" section before you begin

No matter what you do, please read the "Assignment" section before you begin writing. Further, it is *highly recommended* that you read the "Assignment" section first before reading the "Background" and "Dispute" sections of the examination.

5. Starting and Stopping the Exam

The actual examination problem(s) section has six (6) pages.

Without looking at the content of the examination problem(s), please count your pages now to ensure that your examination is complete. If not, notify the proctor immediately.

"Warning" that the end of the exam period is approaching will be given by the proctor writing on the blackboard in the exam room(s) the amount of time remaining at approximately the five minute mark.

When time is called, stop writing immediately.

DO NOT TURN THE PAGE UNTIL YOU ARE INSTRUCTED TO DO SO.

II. PATENT LAW FINAL EXAMINATION

1. The Background

Galen Adams, M.D. ("Doc") lives in rural Kansas. An avid hunter, he builds gun telescopes. With this skill, he develops a miniature magnifying camera technology for surgical procedures. Doc patents several aspects of his technology. His '100 U.S. patent has claim 1 as follows: A low-light-conditions magnifying process, comprising: (a) directing light through polarized glass; and (b) calibrating the polarization of the glass using the Arness equation.¹

Claim 1 of Doc's '200 U.S. patent (which does not use polarization) is as follows.

1. A miniature magnifying camera lens ("MMCL"), comprising: (a) a circular lens body of thickness (T) not less than approximately 10 millimeters; (b) a central internal cavity at the center of the circular lens body; (c) at least four cylindrical cavities extending from said central internal cavity to the outer edge of said circular lens body; (d) a gas occupying



all said cavities, wherein said gas is X, Y or Z; and (e) a low-light magnifying power in the range of 1.5 to 5.5.²

Doc filed for the '200 patent on June 6, 1999 in the U.S.³ Doc is also an avid electronics hobbyist. This interest leads to another invention, remote robotic surgery. Claim 1 of Doc's '300 U.S. patent in this area is as follows.

¹ The Arness equation is a well-known formula that calculates the natural law of polarization, a natural phenomena that makes glass polarize certain ways when subject to a twisting stress over time and under heat.

² Although not part of the claim, the specification notes that a sealing ring goes around the outer edge of the circular lens to seal the gas inside the cavities.

³ Doc did not claim priority from any other application.

1. A surgical system, comprising:

(a) an endoscopic⁴ instrument;

(b) a miniature magnifying camera ("MMC") on said endoscopic instrument for obtaining video images of internal body tissues inside a patient's body via said endoscopic instrument;

(c) transmission means operatively connected to said MMC for transmitting, over a signaling link to a remote location beyond a range of direct <u>visual</u> manual contact with said patient's body and said endoscopic instrument, a video signal encoding said video image;⁵

(d) receiver means for receiving actuator control signals from said remote location via said signaling link;

(e) a surgical instrument insertable into said patient's body and movable relative to said patient's body and said endoscopic instrument; and

(f) robot actuator means operatively connected to said surgical instrument and said receiver means for actuating said surgical instrument in response to the actuator control signals received by said receiver means.⁶

The detailed description section of the '300 patent discloses several embodiments, including: (i) an embodiment where the surgeon is located in another city; and (ii) an embodiment where the surgeon is located in the operating room, in one instance behind a partition blocking the surgeon's view of the operating table, in another instance without the

⁴ "Endoscope" means: an instrument for examining visually the interior of a bodily canal or a hollow organ such as the colon, bladder or stomach.

⁵ Doc made the amendment indicated in this claim element during prosecution in response to the PTO examiner's indefiniteness rejection.

⁶ The '300 patent specification discloses an electric "servo" motor as the structure performing the function of the claimed robot actuator means.

partition. When Doc amended claim element (c) he noted to the PTO: "the advantage of the invention is realizable in any surgical operating situation where the surgeon is beyond the reach of the patient, but the greatest benefit occurs when there is complete visual obstruction of the patient across short or long distances."

Festus Haggen ("Haggen") just began selling a camera-guided remote surgical system. Haggen's system has a MMC on an endoscopic instrument. The MMC, however, does not contain a lens covered by claim 1 of Doc's '100 patent or Doc's '200 patent. Haggen's company is located in rural Kansas near where Doc lives. They have known each other for many years.

2. The Dispute

Doc sues Haggen for patent infringement. During the proceedings the following additional facts are discovered and/or arguments, admissions and stipulations are made.

(i) Doc had originally sent Haggen cease and desist letters threatening suit under all three patents, but in the actual suit Doc made infringement claims based only on the '300 patent.⁷

(ii) Haggen challenges the validity of the '100 patent as drawn to non-patentable subject matter, but stipulates that otherwise it is valid.

(iii) Against the '200 patent claim 1, Haggen offers a prior art printed publication describing: a MMCL with thickness of 9.99 millimeters, drilling two 90-degree-offset straight holes from the outer circular edge of the MMCL, through the center of the circular lens, and continuing through to the other side to the opposite circular edge, and infusing both holes with gas Y. Haggen also offers testimony that more than a year before Doc's date of invention ("DOI"), Mr. Newly O'Brien used in Brazil a MMCL with lens body thickness of 1 centimeter

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 $^{^{7}}$ Assume for this examination that the cease and desist letters provide Haggen valid jurisdiction to challenge the validity of the '100 and '200 patents in counterclaims, which he does, even though the patents are not asserted in Doc's suit.

and otherwise meeting elements (b)-(e) of the '200 patent's claim 1. Mr. O'Brien sent photos he took in Brazil with the MMCL-equipped camera to his friend, Mr. Chester Goode, in Kansas.

(iv) Doc loves hunting in Canada. During a hunting trip in 1997, Doc met Mr. Quint Asper, a distributor of surgical optics in Canada. Mr. Asper encouraged Doc to patent his MMCL invention in Canada, so Doc filed in Canada during May 1998. During June 1998, Doc sent an email to Mr. Asper that included an attached detailed, annotated drawing that clearly disclosed the invention as ready for patenting, and the message: "Dear Quint, I would like you to buy 100 units at my standard published demonstration price so you can begin developing the Canadian market." Mr. Asper's long-delayed return email, dated June 4, 1999, did not acknowledge the mention of purchasing 100 units, but said: "Dear Doc, I just noticed that your Canadian MMCL patent issued today."

(v) Haggen argues that the '200 patent is obvious in light of Dillon in view of Greenwood and Russell.⁸ Dillon discloses an eight-sided MMCL, 2 centimeters thick, with four cylindrical cavities extending inwardly from four equally spaced locations along the outer edge of the MMCL, with a low-light magnifying power of 2.0 to 5.0. Greenwood discloses use of a gas inside a spherical cavity at the center



of a spherical lens. The Russell reference, a U.S. patent⁹, discloses use of gas X, Y or Z inside a lens cavity. Doc asserts that Russell has been under an obligation to assign his patent to Doc since before Doc's DOI for claim 1 of the '200 patent. A POSITA would know that a true circular lens would perform better than an eight-sided lens. The Greenwood lens reference discusses the tremendous advantages of gas-filled cavities at the center of a lens and the generally positive performance of gas-filled-cavity lens. Doc has not yet started commercial

⁹ Russell is prior art by virtue of 35 U.S.C. §102(e)(2)[A].

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⁸ Doc admits that all three asserted references are prior to his DOI for the '200 patent, and that all are analogous art.

sales of any products covered by the '200 patent, but he did recently complete agreements to license the '200 patent technology to four companies who supply 80% of the relevant surgical optics market.

(vi) Haggen offers the testimony of Pam Posita, who states that she attempted to create a lens based on the '200 patent disclosure and was unable to obtain low-light magnification above 1.3 after thousands of experiments. The district court appoints the world's best optics scientist as a court-appointed expert, who replicates Ms. Posita's findings. The court-appointed expert is eventually able to obtain magnification in the claimed range on his 10,000th experiment. The expert reports to the court that: (A) the '200 patent disclosure does not tell a POSITA the pressure setting for the gas in the cavities; and (B) that gases X, Y and Z have unpredictable optical performance characteristics when used in lenses.

(vii) Haggen admits that his system has element (a) of the '300 patent's claim 1. However, he contends: (A) that his system does not meet elements (b), (c) and (e) because Haggen's system is designed to only operate on farm animals, the word "patient" in those claim elements being properly construed to cover humans exclusively; (B) that his system does not meet the claim term "remote location" in elements (c) and (d) because his system is commanded by the surgeon within the operating room from a location where the surgeon can see the operating table (about 2-3 meters from the patient); (C) otherwise, his system meets elements (c) through (d); (D) the proper claim construction of "remote location"¹⁰ excludes any location within the operating room, or, at its broadest, must exclude any location closer than three meters from the patient;¹¹ and (E) his system does not meet claim (f).

¹⁰ The word "remote" means: "1. a. Located far away; distant in space. b. Hidden away; secluded . . . 7. Operating or controlled from a distance."

¹¹ Haggen contends that three meters is the average distance within which a person with eyesight suitable for driving could see the endoscopic instrument.

(viii) Haggen argues that his system does not meet the '300 patent claim 1 element (f) because his expert, Phil PositaPerson ("PPP") testified for the court: (A) that Haggen's system uses a very recently developed technology, nano-enactors, to drive its robot actuator; but, (B) under cross-examination, PPP admits that Haggen's nano-enactors perform a SSF in a SSW with a SSR compared to the servo motors of the '300 patent claim 1 element (f).¹²

Haggen produces an email exchange. The first message is one he received from Doc (ix) a few months after Doc's '300 patent issued, serendipitously around the time Haggen began discussions with bankers and investors to build the facilities where he would develop and manufacture his camera-guided remote surgical system. The email read: "Festus, you old coot! How are you! I just had a wonderful new U.S. patent issue for my camera-guided remote surgical system. It looks like my part of Kansas is where the real inventors live! Now, I hear through the grapevine that you are fix'in to build a plant and make a remote surgical system. Fair is fair, I just wanted to warn you about my new patent so you know that there is no use in start'in down that road." Haggen quickly reviewed Doc's patent. He then immediately responded with an email reminding Doc of their familial connections and common Kansas heritage, requesting that Doc forebear enforcing his patent because Haggen could not afford a license nor the cost of a redesign. Doc responds: "Now Festus, since you went and brought the notion of kin folk into this thing, I have thought long and hard about helping you out, and I am willing to do so; put your mind at ease – I won't bring my patent against you." Twenty minutes later, Doc sends an email to his Aunt Ma Smalley: "Ma, I just led old Festus Haggen to the collection plate! He is going to build his plant and then after his sales are nice and healthy, I will swoop down on him with my patent for a nice fat royalty percentage!" Many months later, after Haggen has constructed his facilities and is about to start his sales activity, Ma Smalley forwards Doc's "collection plate" email to a friend, who inadvertently forwards it to Haggen.

¹² Nano-enactors were developed after Doc's '300 patent issued. The court verified PPP's testimony by appointing an expert, who corroborated PPP's statements.

III. THE ASSIGNMENT

You are an associate in a law firm representing Doc (the "Plaintiff"). A firm partner wants you to write an analysis for Plaintiff's issue(s) for each of the patents and/or defendants enumerated in the examination question, *based only on the law from your Spring 2003 Patent Law class*. The analysis should do the following as briefly as possible: (i) discuss the arguments and positions that Plaintiff should assert or take, or consider asserting or taking, against the defendant(s); (ii) evaluate the arguments and substantive merits from Plaintiff's perspective and defendant(s) perspective, articulating defenses and counter-arguments each might assert; (iii) assess the strength of each party's arguments; and (iv) determine for each issue who is likely to prevail and explain why.

If there are any additional critical facts that would materially impact the outcome of a particular issue, the partner would like you to note what such facts would be. In such case, *briefly* describe how such critical facts might impact the outcome, i.e., indicate *at most one and only one* differing result that would ensue from different reasonable factual assumptions.

The partner would like the memo organized logically by subdivisions within patent law. In particular, it makes sense to discuss any invalidity issues before any infringement issues. This requirement is only for the organization of your memo – it is perfectly fine with the partner if you prefer to work on the areas in whatever temporal order suits you.

The memo does not need a general introduction. The partner would like you to proceed immediately to analyzing the issues. The location of final jurisdiction and/or venue for the expected trial is unknown at this time, except that it will be in federal court. Thus if there are any relevant and significant outcome-determinative differences in majority/minority rules, the partner would like these briefly noted and briefly analyzed if the facts are available to do so, but again only to the degree of one and only one alternative per any such issue.

The partner would like you to analyze infringement issues in the suit even if your memo determines that the relevant claim(s) of Plaintiff's patent is invalid or unenforceable. In addition, evaluate both literal and DOE infringement for each infringement assertion in the suit that you analyze even if you determine that infringement exists under the literal infringement analysis. Some patent claims may have multiple issues of invalidity charged against them. Each invalidity issue raised by the problem's facts should be evaluated even if your analysis determines that a patent claim is invalid due to one of the raised issues.